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THE RELATIONSHIP BETWEEN CAREER MATURITY AND COMMITMENT TO WORK IN ALTERNATIVE AND REGULAR HIGH SCHOOL STUDENTS

By

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In loving memory of my mother,

Louise A. English,

who told me I could.

Also for

James E. English, my father, who has always

believed in me and my abilities,

and

Angelica and Allen,

my future.

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The present study examined the relationship between several career readiness variables of alternative and regular high school students. Specifically, the relationship between career maturity as measured by the Career Development Inventory (CDI) and measures of the relative importance of work and study as assessed by the Salience Inventory (SI) were investigated and compared between two high school groups.

In this study data were collected from 184 high school students, 80 of whom attended an alternative high school and 104 of whom attended a regular high school. Correlations and variance analyses were done to examine differences between career maturity and work and study salience in the two groups.

Alternative high school students were more career mature and more committed to work and study than were the regular high school students. Although not a part of any hypothesis, gender differences were noted. Considerable gender differences were found on both instruments. Female students scored significantly higher than male students on all three summative scales of the CDI. Female students were also more committed to work and school than were male students.

The fact that the alternative high school students were more committed to their roles as both workers and students was explained by the difference in the overall maturity level of this group. Nonetheless, this study clearly showed that students who attended this alternative high school were more motivated than were regular high school students in the career readiness attitudes and behaviors investigated and compared. Two hypotheses received full support, one was partially supported, and two were not supported.

CHAPTER ONE
INTRODUCTION

> The work a man does to earn his livelihood stamps him with mental and physical traits characteristic of the form and level of his labor, defines his circle of friends and acquaintances, affects his use of leisure, influences his political affiliations, limits his interests and the boundaries of his culture. (Davidson & Anderson, 1937, p. 1)

Statement of the Problem

It is surprising that, in a society as advanced as the United States of America, the nature and the level of literacy skills demonstrated by certain groups in the population are inadequate. Although the United States has come closer than many other countries to providing an excellent universal-education system for all of its citizens, many citizens of this country have not been able to participate fully and equitably, and thus even ordinary students have been penalized (Parnell, 1985). There is mounting concern that if substantial efforts are not made to attempt to increase student achievement, the overall ability of our own nation's human resources will decline considerably in the coming decades (Kirsch & Jungeblut, 1986).

Naisbitt (1984) has warned that we are living in a time of parenthesis, the time between eras. He describes our society as one moving from the old industrial society

of the past to an evolving new information society where the economy is based on the creation and distribution of information and knowledge. Naisbitt further depicts the new era as one of both "high tech/high touch," where new technologies are matched with equally new and creative human responses. Nasbitt describes this period of parenthesis as one of ambiguity and change, where new possibilities are readily available for those able to anticipate the new era. Prince (1970) has also written about the challenge of change in the near future and the importance of changing in creative new ways versus holding onto the past.

Thus in a time of both great need and opportunity it is essential to rethink certain aspects of our educational system. The area of career choice and preparation is a likely subject for investigation. In particular we need future research efforts in vocational and career psychology to move beyond earlier efforts while continuing to build on them. New models of career development are essential if education is to be based upon individual student needs and the requirements of a rapidly changing society (Parnell, 1985). Researchers in career and counseling psychology have been rethinking and reformulating concepts that encompass a broader definition of career development, one that includes the challenges of an

information age society and the needs of its individuals (Holland, 1974).

The concept of career maturity has been the central subject of many creative career education programs in high schools and colleges and has been the subject of a number of recent studies (Crites, 1978; Nevill & Super, 1988; Super & Nevill, 1984; Thompson & Lindeman, 1984). The notion of career maturity or vocational maturity, as a composite evaluation of components of the manifested self-concept and other behavioral indicators of adolescent subjects, has been firmly established in the literature of career psychology (Gribbons & Lohnes, 1965). The measurement of career maturity has been a rapidly developing activity, according to Norton (1970), and one in which considerable future activity is anticipated.

The early studies of career maturity used multidimensional approaches encompassing a variety of assessment methods and approaches. These studies examined measures of career maturity in terms of their intercorrelations and closeness to other variables which could be viewed as causes or concommitants of career maturity (Jordaan & Heyde, 1979; Super, Crites, Hummel, Moser, Overstreet, & Warnath, 1957; Super & Nevill, 1984; Super & Overstreet, 1960). Crites (1978) and Super and Nevill (1984) have investigated the relationship between career maturity and

possible determinants such as socioeconomic status, intelligence, school achievement, and career commitment.

Career commitment and work salience have recently emerged as major constructs in career development theory (Kanungo, 1982; Osipow, 1983a; Super & Nevill, 1984). The Salience Inventory (SI) (Super & Nevill, 1985), which is a measure of the relative importance of work, provides researchers with the opportunity to examine the relationship between career maturity and work importance. Being able to objectively and reliably assess career commitment enables researchers to study its relationship to other determinants of career maturity and career maturity itself (Nevill & Super, 1988; Super & Nevill, 1984).

Purpose of the Study

The purpose of this study will be to investigate and compare several career readiness variables of alternative high school students with those of regular high school students. Specifically this study will investigate and compare the relationship between career maturity as measured by the Career Development Inventory (CDI) (Super, Thompson, Lindeman, Jordaan, & Myers, 1981), and commitment to and participation in work and school as measured by the Salience Inventory (SI) (Super & Nevill, 1985) in alternative and regular high school students in Central Florida.

Need for the Study

Futurists forecast that there will be major changes in the world's job markets in the next 15 to 20 years. Centron and Appel (1984) predict that the job market in the United States will change dramatically by the 21st century. Among the changes predicted by various authors are a decrease in the number of jobs filled by factory workers; biotechnology as one of the fastest growing fields; a need for more than 3 million computer-aided design engineers to work as software specialists; an involvement of nearly four percent of all workers in some kind of job training program annually; and the necessity for workers to learn new skills and move to new locations, many to southern and southwestern cities (Centron & Appel, 1984; Centron & O'Toole, 1982).

Parnell (1985) notes that as the American society grows technically and scientifically more sophisticated, it continues to produce an increasing number of individuals who are undereducated, unskilled, and unable to cope with increasingly demanding technological changes. While the supply of baccalaureate-degree engineers remains adequate, little attention is being given to preparing the much needed mid-level technicians. For example, Centron and O'Toole (1982) state that the U.S. Department of Labor's Department of Labor Statistics has identified 60 jobs that it describes as the fastest growing occupations

in the United States. Few of these 60 jobs require a college degree. Some of these jobs, according to the authors, have no educational prerequisites beyond high school, and all 60 offer many favorable incentives such as starting salaries higher than the national norm.

The need for this study evolves from the rapidly increasing mismatch between labor market realities of the future and the projected availability of trained workers. This mismatch between skilled laborers and job availability according to Parnell (1985) is a tragedy in that "tremendous opportunities exist on one hand while sizable unemployment remains on the other" (p. 23). There are a number of factors which indicate that the shortage of skilled workers will grow worse in years to come. The first factor is an aging work force, i.e., the proportion of older workers to younger workers is steadily increasing (Parnell, 1985). Second, the vast majority of the work force in the year 2000 is already working today. Third, new additions to the work force will be drastically reduced, which will make youth more attractive as workers. Finally, adds Hodgkinson (1985), of the relatively small number added to the work force by 2000, close to half will be minorities.

There have been great strides made since 1900 in increasing the educational levels of American citizens, when only 10 percent of the youth graduated from high

school. By 1950, 25 percent of black youth and 56 percent of white youth graduated from high school, compared to 75 percent of black youth and 85 percent of white youth in 1978. It is estimated that around 60 percent of Hispanic youth graduate from high school (Hodgkinson, 1985). Recent statistics reported by Evangelauf (1990) indicate declines in the graduation rate nationally to 71.1 percent in 1988 from 71.7 percent in 1987. The rate of high school graduation in Florida according to the study is the lowest of all states at only 58 percent (Evangelauf, 1990).

According to Hodgkinson (1985), high school dropouts have a rather typical profile. They usually are from low-income or poverty settings, often from a minority group, and have parents who did not complete high school and who do not provide a support system for academic success. These youth often come from homes where English is not the major language spoken. Dropouts usually have low and inadequate academic skills, especially reading and math, and are most often males bored with school who perceive themselves as failures in the school culture (Hodgkinson, 1985).

The results of poor academic preparation is indeed a persistent and growing problem in the nation's labor market that will not be solved by economic growth. Hahn and Leiman (1985) warn that a large portion of young

adults today and in the future are not able to and will not be able to gain a foothold in the economy as wage earners. The majority of these persons according to the authors will be poor and from ethnic minority groups and will have left high school before graduation, and thus meet the profile mentioned above. Many of these persons will have committed crimes, making themselves unappealing to employers. Others, particularly single parents, will have had children out of wedlock, creating additional responsibilities and limiting their freedom to maintain regular jobs. Lastly, Hahn and Leiman (1985) believe that the poor social and educational preparation of these young adults for jobs results in chronic youth unemployment and reduces their chances of ever establishing adequate work patterns and finding steady work throughout their life spans.

The unemployment rate of youth, particularly minority youth, currently exceeds the total national rate of unemployment during the Great Depression. The unemployment rate for black teenagers is near 45 percent (Parnell, 1985). Hahn and Leiman (1985) note that over the past 25 years, while white teenagers increased their rate of participation in the labor force from 50 to 60 percent, the labor force participation of black teenagers dropped from 50 percent to 40 percent. The authors state that the

majority of the burden of unemployment among youth rests upon poor and minority youth who have dropped out of school.

The concern for the high illiteracy rate in the United States is echoed by a report titled Literacy: Profile of America's Young Adults, by the National Assessment of Educational Progress (Kirsch & Jungeblut, 1986). This study found that as many as 20 percent of the subjects were functionally illiterate, lacking skills necessary to function smoothly in modern society. Minority subjects, blacks and Hispanics, were rated as having especially severe problems (Kirsch & Jungeblut, 1986).

Hahn and Leiman (1985) warn that if the job problems of disadvantaged youth are not adequately addressed, the country could be faced with the development of a permanent underclass with the mixture of family instability, involvement in and exposure to crime, poverty, unemployment, and a home life for children that perpetuates the continuance of this style of living. Many questions remain unanswered regarding what meaningful interventions are needed. The present study will focus on these kind of vocational problems in our society and will emphasize high schools and community colleges as the points of departure.

Proponents of career counseling have begun reviewing the major approaches of career counseling relative to the

needs of a new era (Crites, 1974; Holland, 1974; Super, 1984). Holland (1974) cautions us about devoting much effort to expensive and impracticable methods of providing vocational counseling and cautions against "intellectual wars about the best approach" (p. 24). The need for this study relative to vocational counseling is that it will build on both early and recent perspectives and approaches in the field as stated by Holland (1974). In addition to incorporating main strengths existing in most of the earlier approaches, Holland (1974) advocates approaches that (a) assume that people can do more for themselves than has usually been assumed, (b) take advantage of a person's knowledge of his/her interests and competencies, (c) stress information, experience, and immediate feedback, rather than insight, talking, and remote reinforcement, (d) support personal experiences and exploration, and (e) respect a person's goals and problems as given.

Significance of the Study

Career development is being defined increasingly as the continuous unfolding of one's life roles, life settings, and life events (Gysbers, 1984). Super (1982) states that career development may be conceptualized as comprising the following two dimensions: one stemming directly from the value one attributes to work, and the other from the perceived need to make a living and a way of life. The importance of work varies with the

importance of other roles that individuals value and upon the opportunities which the labor market and society at large offer for the attainment of those values (Super, 1982). Therefore, the value of work involves both sociological and psychological factors. The former involves roles in the social order. Super (1982) also states that schools must prepare people to play a variety of changing roles in the social order and occupationally and that counselors must help students find a variety of outlets for their talents at work and during leisure time. The latter, psychological factors, encompasses individuals' relationships with their own indigenous needs, values, and confirmations or disconfirmations received from others. In response to this factor, Super (1982) suggests that educators and counselors have a special responsibility for helping students perceive work as one of the ways in which important personal values can be realized.

Gysbers (1984) cites three reasons for rethinking and reformulating the concepts of careers and career development: (a) the vast and considerable changes that are taking place in the social and economic system, (b) the changing values and beliefs individuals hold about themselves, others, and the world, and (c) the fact that more people are seeking meaning and coherence in their life roles. The current study is being conducted on the

premise that the results will yield a greater capacity for understanding the motivations of high school students and other similarly aged individuals who enter the labor force prematurely.

Moore (1986) reports results of a survey taken in Pinellas County, Florida, which revealed that 75 percent of high school seniors have after-school jobs and 40 percent of the ninth grade students are working. Similar results were reported about Orange County High School students where 50 percent of the students polled reported having part-time jobs. What effect does participation in work at an early age have upon the unfolding and interaction of a teenager's life roles and career maturity? The significance of this study on theory will address this and similar questions.

The beginning of the current conceptions of career development began in the early 1950s when theorists began emphasizing a broader and more developmental view of occupations and occupational choice (Gysbers, 1984). The impact of these trends for counselors is that they are challenged to continue expanding and extending their knowledge of the changing environment and structures in which career development unfolds. Likewise, the significance of this study to the practice of career counseling is that the results will yield new information that

counselors and student personnel professionals can use to assist high school students to prepare for careers.

The significance of this study relative to training in the field of counseling psychology is that it extends and expands important concepts in the area. Indications are that movement is needed toward more definitive and unified career counseling models for high school students (Osipow, 1990). Counselor trainees need to be aware of the new career-competency requirements created by an information society as well as the implications of the increasing number of low-skill low-paying jobs requiring minimal skills. In addition, counseling training programs must equip trainees with a repertoire of knowledge and skills that will enable them to be effective in multicultural settings.

Definition of Terms

Aptitude tests are often used in vocational counseling or educational counseling to assess the talents and skills of the client.

Behavior change is the overall goal or outcome of counseling.

A career is the sequence of occupations in which one participates. While some persons remain in the same occupation throughout their life span, others have a series of quite different occupations (Tolbert, 1980).

Career counseling is counseling that helps clients make decisions about work, training, or education related to a career. This phrase will be used interchangeably with vocational counseling and career guidance.

Career commitment refers to the orientation and motivation necessary for engaging in work related behaviors (Super, 1983).

Career development refers to the lifelong process of developing work values, establishing a vocational identity, learning about opportunities, and gaining experience through a variety of working situations. Development involves a process of investigating choices and evaluating occupational possibilities. This phrase will be used interchangeably with vocational development (Tolbert, 1980).

Career maturity is a global construct developed by the Career Pattern Study (Super, 1955) which lists measures that predict certain kinds of adult occupational achievements and progress (Heyde, 1979). In this study career maturity refers to the scores on the Career Development Inventory (CDI) (Thompson & Lindeman, 1981).

A career pattern is the sequence and tenure of occupations in the life span of an individual that indicates long-term trends such as upward progression (Tolbert, 1980).

Career readiness orientation is used to include career maturity variables and concepts that have been demonstrated as being determinants of career maturity.

Job refers to a group of similar positions in a business, industry, or other place of employment (Tolbert, 1980).

An occupation is a definable work activity that occurs in many different settings (Tolbert, 1980).

Position is a group of activities, tasks, or duties performed by one person in a work situation (Tolbert, 1980).

Work is purposeful and gainful mental, physical, or combined mental-physical activity that has a product--something of economic value (Tolbert, 1980).

Work salience is the relative importance a person attributes to work (Super, 1983).

Organization of the Study

The study will be organized in the following manner. Chapter Two will include a review of related literature and sections on: (a) historical overview of assessment in career counseling and guidance, (b) a review of career readiness orientation, (c) the relationship between work commitment and career maturity, and (d) summary. Chapter Three will present the research methodology used in the investigation and include the following sections: (a) the hypothesis, (b) population and sample, (c) instruments,

(d) procedures, and (e) analysis of data. Chapter Four will provide the results and a discussion of the results, and Chapter Five will include a discussion of the results, the conclusions, implications, summary, and recommendations for further research.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

The rise of technology and major economic changes in society are shrinking the number of traditional jobs, while new jobs are demanding greater sophistication and education. At no other time in the history of our nation has there been a greater need for individuals to master the knowledge, attitudes, and skills necessary for successfully planning and beginning careers. Yet leading authorities report that more and more young people are leaving high school ready for neither college nor work (Kirsch & Jungeblut, 1986; Parnell, 1985). Parnell (1985) warns that the crucial issues facing schools today are developing in students the competencies required to cope with real-life roles and communicating to students the relationship of these competencies to the school curriculum. For more than a half century career development theorists have rapidly generated much productive and innovative research, such that career development is a high-priority item on an international as well as a national scale (Tolbert, 1980). The challenge is ever present to theorists and practitioners to develop and use the tools that will enable positive outcomes for career planning concerns.

This chapter presents a review of the literature which is most directly related to the purpose of this study. It includes selected fundamental theories, research, and literature relating to career development and is organized according to the following sequence:

1. Historical overview of assessment in career counseling and guidance.

2. A review of career readiness.

3. Relationship between work commitment and career maturity.

4. Summary

Historical Overview of Assessment in Career Counseling and Guidance

Goldman (1961) makes the distinction between research literature which focuses on the tests themselves, their validity, norms, and characteristics, and those which report research, theory, and techniques related to the use of tests in the counseling process. This review will focus primarily on the latter group with such aspects as selecting tests for particular purposes, administering, interpreting their results, and reporting of the interpretations.

Matching Models

According to Super (1983), the model typically applied in assessment for career guidance and counseling had its origin in the United States Army research of World War I. This model, referred to as the "matching model"

of assessment, matured during the 1920s and 1930s while researchers investigated characteristics and causes of unemployment during the Great Depression and recovery period (Borow, 1964; Super, 1983). The basis for making a comparison under the matching model was ability. Counselors making the assessment began by asking themselves and their data the question: "At what level can this person best function?" (Super, 1983, p. 55). Patterson and Darley (1936) in a classic research study compared female clerical workers with female department store sales clerks on verbal ability, perceptual speed and accuracy, spatial visualization, and finger dexterity in order to establish profiles for matching the abilities of a person to the requirements of the occupation. Thorndike and Hagen (1969) used more advanced statistical methods in matching abilities in their long-term follow-up study of aviation cadets during World War II. They compared pre-employment test scores to civilian employment status 10 years later.

Interest, like abilities, was used as the basis of comparison under the "matching models." Strong (1943) first provided classifications of occupations according to interests in the 1940s (Super, 1983). It was the standardized works of Strong that provided the basis for the greatly used classifications of Anne Roe and John Holland. From this point on, Super (1983) reports, both ability and

interest were used in the next generation of "matching models."

Holland (1963) postulated six occupational environments and six personality types. He contended that people could be characterized by their resemblance to each personality type: realistic, artistic, investigative, social, enterprising, and conventional. The more a person resembled a particular type, the more he/she was likely to exhibit the personality traits and behavior associated with that type. The emergence of personality types comes as a result of the interaction between heredity and environmental factors. This interaction leads to a selective interest in certain activities which in turn directs the individual toward specific types of behaviors. The interactions of individuals with corresponding environments lead to many outcomes which can be predicted and understood from a knowledge of the personality type and environment model (Holland, 1963). These outcomes include vocational choice, vocational stability and achievement, personal stability, creative performance, and susceptibility to influence. Holland (1963) further states that each person is a product of an interaction between a specific heredity and an assortment of cultural forces such as peers, parents, significant others, social class, values, norms, and physical environment. The result of this interaction, concludes Holland (1964), is a

characteristic set of abilities, perceptual skills, life goals, values, self-concept, and copying behaviors. Occupational classes designate types of people, and similarly, vocational choice becomes a function of personality. Though Super (1983) considers Holland's model to be scientifically less advanced than Anne Roe's model, he acknowledges that it is much better known and more widely used today, because Holland has provided practical means for putting the model to work in two instruments, the Vocational Preference Inventory (VPI) (Holland, 1975) and the Self-Directed Search (SDS) (Holland, 1970).

Roe used both a highly selected set of interest categories and a refined set of ability levels in her approach to assessment in career guidance (Super, 1983). Roe's theory was based upon the proposition stemming from research on the effects of childhood experiences on adjustment, creativity, and intelligence. She concluded that early home climate played a significant role in career choice (Tolbert, 1980; Roe & Siegelman, 1964). A second major personality theme in Roe's theory is "need" theory, specifically used by Maslow (1954). The third major proposition is her notion of genetic influences on vocational decisions and on the development of need hierarchies. Roe (1957) attempted to represent the relationship of careers to need hierarchies. According to Osipow (1968) the scheme is based on the degree to which an

individual is or is not oriented toward people. Though the home environment in the theory influences the type of vocational activities, such items as the genetic structure and the pattern of releasing psychic energy influences the occupational level the worker achieves (Osipow, 1968).

Roe's theory has stimulated a tremendous amount of research. According to Super (1983) her classification of occupations according to field and level has provided a broad basis for research and subsequent validation studies. Griggs (1959) tested Roe's hypothesis by investigating differences in childhood memories about parental treatment between women studying mathematics and science and women preparing to be nurses. According to Roe's theory, Griggs (1959) predicted that mathematics and science majors would recollect a "colder, less attentive" parental attitude than would nursing students. The author's findings failed to support Roe's theory, indicating that there were no differences between the two groups in what they recalled from their child-parent interactions.

Shaffer (1987) states that when any testing is used--personality, interests, attitudes, achievement, or performance--at least a portion of the counseling is based on trait factor theory or the "matching model." This model is still the most widely used and has been attacked from a number of angles. First, according to Shaffer (1987), a

trait factor model encourages "point-in-time" thinking on the part of the client. Primary focus is concentrated on a single choice of a job or training. Second, under the "matching model," by predicting the future from past information about people, tests reify the past. Finally, this model assumes that persons tested are all sufficiently mature vocationally with stable measurable traits and are ready to use the self-knowledge ascertained in making career decisions (Super, 1983).

Developmental Models

There is good evidence that supports the notion that developmental issues are of great importance in relation to a person's readiness for career decisions (Crites, 1978; Jordaan & Heyde, 1979; Super, 1983; Super & Overstreet, 1960). The influence of client centered theory (Rogers, 1951) moved the focus from trait factor theory and test interpretation to the emotional side of decision making. This new approach emphasized the client's role and highlighted the implementation of the self-concept in an occupational capacity (Crites, 1974, 1976).

Patterson and Watkins (1982), in summarizing the tenets of client-centered counseling, stated that the attitude and beliefs of the counselor in the client's worth and self-direction are the bases from which counselors operate. From this perspective, the authors

continue, testing or assessment becomes a tool for the benefit of the client to better understand himself/herself and facilitate his/her self-actualization. This radical and different paridigm, in its approach to assessment, sets the stage for the developmental model. In many ways, the developmental model represents a modification of the directive and didactic matching models and the non-directive style of client centered models, combined with behavioral methods to reflect the best of several approaches to career counseling (Crites, 1974).

Buehler (1933) was the first to focus attention on life stages as they related to careers and identified the career development tasks found in various life stages. Super (1942) made use of these data and later synthesized what was known about career development from works of Havighurst (1953, 1964) and Ginzberg, Ginzberg, Axelrod, and Herma (1951). Super (1953) views career development as a continuous process and career choice as a synthesizing process. He explains the notion of synthesizing as a condition of integrating the individual's personal needs and resources on the one hand, and the economical and social demands on the other.

Super's theory includes the following 10 propositions:

1. People differ in abilities, interests, and personalities.

2. Because of their diversities people are qualified for a number of occupations.

3. Each occupation requires characteristic patterns with tolerance wide enough to allow some variety of individuals in each occupation.

4. Vocational competencies and preferences change with time and experience, although self-concepts are relatively stable from late adolescence until maturity.

5. The developmental process may be summed up in a series of five life stages, characterized as growth, exploration, establishment, maintenance, and decline, and these stages may in turn be subdivided into (a) fantasy, tentative, and realistic phases of the exploratory stage, and (b) trial and stable phases of the establishment stages.

6. The nature of a career pattern is determined by the individual's parental socioeconomic level, mental ability, personality, and opportunities.

7. Development is guided by the maturation of ability, interest, reality testing, and the self-concept.

8. The process of vocational development is essentially that of developing and implementing a self-concept.

9. Vocational development is a compromise process between self-concept and reality, between individual factors and social ones, in which role playing is a

necessary product, whether the role is played in fantasy or in real life activities such as school or work.

10. Work and life satisfaction depend upon the degree to which an individual is able to find adequate outlets for his/her abilities, interests, personality traits, and values, as well as upon the establishment of a type of work and a way of life in which he/she can act out the kind of role which his/her growth and exploratory experiences have led him/her to consider appropriate (Super, 1953; Tolbert, 1980).

A Review of Career Readiness Orientation Career Pattern Study

According to Tolbert (1980) the monograph for the Career Pattern Study, a longitudinal study of eighth and ninth grade males of Middletown, New York, represents a landmark in the study of vocational maturity. The timely research project was constructed on a model that drew on the development theories of a number of writers and can be summarized in four principles:

1. Development proceeds from random, undifferentiated activity to goal directed, specific activity.
2. Development is in the direction of increasing awareness and orientation to reality.
3. Development is from dependence to increasing independence.
4. Mature individuals select and pursue goals. (Thompson & Lindeman, 1984, p. 2)

Twenty possible measures of vocational maturity were identified and refined, leading to a model that was

intended to be all-inclusive, in the interest of assessing all possible measures. Data were collected from all of the pupils in a series of one-hour testing and tape recorded interview sessions. Techniques used in the initial phase included case studies involving a questionnaire on family, education, recreational, and social history; an autobiographical statement designed to focus attention on topics relevant to the study; two projective tests; and interest and aptitude tests (Super, 1955). According to Super (1955) the Career Pattern Study necessitated a concrete definition of the term "vocational maturity" as a basis for constructing a yardstick with which to assess vocational development and as a guide for choosing data to be scaled for its measurement. The term "vocational maturity" is used to denote the degree of development, the place reached on the continuum of vocational development from exploration to decline (Super, 1955).

Developmental approaches to vocational maturity hypothesize that vocational maturity measures can predict certain kinds of adult occupational achievements and progress (Jordaan & Heyde, 1979). A number of important aspects of vocational maturity have emerged in several studies: (a) awareness of and concern with current and future decisions, (b) awareness of salient factors to ponder in making decisions, (c) availability and use of

various kinds of occupational and educational information, (d) an anticipatory planning approach to life, (e) the acceptance of the responsibility for choice, and (f) the knowledge and use of resources, on-the-job experience, and the wisdom of personal characteristics and preferences (Jordaan & Heyde, 1979).

The most comprehensive research concerning vocational maturity at that time was accomplished in the Career Pattern Study by Super and his associates and students (Herr & Cramer, 1972; Osipow, 1968). The study was designed to gain an understanding of career behavior and to develop techniques to measure and predict it. The validity of propositions of developmental approaches such as vocational stages was assessed. The identification and validation of dimensions of vocational maturity were major research topics (Tolbert, 1980). Five dimensions of vocational maturity were identified in the Career Pattern Study. Each of these dimensions was examined by means of several indices. The dimensions were: (a) orientation to vocational choice, (b) information and planning about preferred occupations, (c) consistency of vocational preferences, (d) crystallization of traits, and (e) wisdom of vocational preferences. Six of the indices of vocational maturity were found to be significantly intercorrelated (Tolbert, 1980).

An interpretation of the results suggested that two factors are relevant to vocational maturity in the ninth grade, namely orientation to choice tasks and use of resources. Results also indicated that among the variables important to the development of a meaningful orientation to vocation choice were those which resulted in behaviors reflecting recognition of the need to make educational decisions that have vocational implication. Important also was the acceptance of responsibility to plan for these decisions, to collect related data, and to make and implement decisions with vocational implications (Osipow, 1968).

Studying variables that might be associated with vocational maturity Super and Overstreet (1960) concluded that vocational maturity is related to intelligence and that, in the ninth grade, age is of less importance than grade placement. In relation to environmental factors the vocational maturity index correlated positively with parental occupational level, school curriculum, amount of cultural stimulation, and family cohesiveness, and negatively with urban background and Protestantism (Super & Overstreet, 1960). The authors found the vocational maturity index to be correlated significantly with vocational aspirations and with the degree of agreement between aspiration and expectation. Vocational maturity was not significantly correlated with any of the personality

variables as measured by the TAT, Incomplete Sentence Blanks, and other identification inventories. Finally, grades, achievement versus underachievement, participation in school and out-of-school activities, and independence were all positively related to vocational maturity, while peer acceptance was negatively correlated (Super & Overstreet, 1960).

Montessano and Geist (1964) compared the occupational choices made by ninth and twelfth grade boys in terms of Super's position that vocational decisions occur in a developmental context in a predictable and orderly fashion. Using the Geist Picture Interest Inventory (GPII) (Geist, 1959) the boys were asked to respond and give reasons for their responses. The reasons were classified according to the attitudes toward occupational choice tasks or occupations themselves in terms of categories named: simple affect, identified interest, personal need satisfaction, assessment of abilities, assessment of opportunities, assessment of the particular occupation, social value, and ambiguous or evasive. The authors hypothesized that if the developmental theory of career preferences had validity, older boys would be more reflective in their reasoning. The findings supported their view. The older boys' responses indicated more concern for vocational opportunities, information about careers, and the social values of given careers than did

the responses of the younger boys, whose responses showed more reliance on simple affect or identified interests (Montesano & Geist, 1964).

More recent analyses of the studies within the Career Pattern Study found that vocational maturity factors common at both the ninth and twelfth grades included occupational information as well as planning, independence, crystallization of interests, and specification and implementation of preferences (Super, 1969). Super further reported that vocational maturity in the ninth grade is related to vocational success in young adulthood. Furthermore, twelfth grade vocational maturity, judged by the same measures, proved even more valid as a predictor of vocational success in young adulthood. These studies do not support earlier findings (Super & Overstreet, 1960) that ninth-grade boys are not yet ready to make sound decisions concerning fields and levels of work (Herr & Cramer, 1972).

Career Development Study

In a search for other measures of vocational maturity Gribbons and Lohnes (1968) launched the Career Development Study (CDS). Like the Career Pattern Study from which it derived a number of important concepts and procedures, the CDS was longitudinal and began following a group of subjects through adolescence to early adulthood (Jordaan & Heyde, 1979).

Analysis of data of the eighth-grade through high school graduation showed that readiness for vocational planning scores, indicating greater maturity on the eight scales, increased from the eighth to the tenth grades. However, eighth-grade scores were better predictors of the extent of educational and vocational planning, educational aspirations, and post-high school vocational adjustment than any other criteria. In addition, eighth-grade scores were as effective as the tenth-grade scores in predicting curriculum choice and level of occupational preferences.

Super (1969) raised questions about the validity of the scales because of the lack of agreement with other types of measurements and the lack of increase in scores with chronological age. However, Gribbon and Lohnes's (1968) data support the concept of different career processes. All of the subjects in the study could be assigned one of the four defined career processes; constant maturity, emerging maturity, degeneration, and constant immaturity. The largest number of subjects fell into the emerging maturity category and the next largest into the degeneration category. Males and females were nearly equally represented in each category (Tolbert, 1980). In the Career Development Study the correlations between parental socio-economic status and the eight Ready For Vocational Planning (RVP) scales ranged from .08 to .33 in the eighth grade and from .03 to .17 in the 10th grade.

From these results, Gribbons & Lohnes (1968) concluded that parental socioeconomic level is not a significant correlate of vocational maturity in early adolescence.

Vocational Development Project

Crites (1961, 1968, 1971) developed the Career Maturity Inventory (CMI) while serving on the staff of the Career Pattern Study. He further refined the five dimensions introduced by Super (1955), and organized and explained in detail their interrelationships in his model of career maturity. According to Norton (1970) Crites conducted the first "straight inventory" approach to measuring vocational maturity in the attitude scale of the Vocational Development Inventory (VDI) (Crites, 1974), later called the Career Maturity Inventory (CMI). The Vocational Development Project (VDP) launched by Crites (1961, 1968, 1971) warrants specific attention because of the longitudinal nature of the design, the specific variables covered, the systematic research program, and the specific instruments used (Tolbert, 1980).

According to Crites (1974) the most relevant results from the VDP effecting the model of vocational maturity are the results from an item analysis of the VDI Attitude Scale. From data on 1,254 subjects in the 7th through 11th grades "biserial correlations for all fifty items in the scale were calculated from a comparison of the upper--and lower--27 percent of the total score distribution

using Flanagan's procedure and nomograph" (p. 312). "Because these correlations are indices of the magnitude and direction of the relationship of each item to the total scale, they can be interpreted as estimates of the first factor loadings on the centroid of the inter-item matrixs" (p. 312). The size and the sign of the biserial correlations confirmed the theoretical expectation that the VDI Attitude Scale is a factorially complex scale (Crites, 1974).

Crites' results merit specific attention here because he was successful in measuring vocational maturity as a construct, and found adequate internal construct validity especially for the attitude scale. Crites' efforts have both practical and research value, providing counselors with information on the rate and level of a counselee's development in regard to career matters, while establishing empirical data on determinants of choice of and attitudes toward occupations (Herr & Cramer, 1972; Tolbert, 1980).

Bathory (1967) used the Miller-Haller Occupational Aspiration Scale as a measure of realism and aspiration and correlated it with the VDI Attitude Scale at the 9th and 12th grades. He obtained a significant correlation of .39. Hollander (1967), in a comprehensive study of vocational maturity scores in relation to vocational choice consistency, decision, and realism, found positive

correlations among each of the variables and maturity of vocational attitudes in a sample of 1,648 students in grades 6 through 12.

Thompson and Lindeman (1984) acknowledge the historical significance of the VDI, later called the Career Maturity Inventory (CMI), and Crites' model and their use in many studies of the impact of career education programs and services. A preponderance of evidence, however, has pointed out that the CMI Attitude Scale is in fact cognitive, and that the CMI does not actually measure career development attitudes (Buros, 1978; Thompson & Lindeman, 1984).

Career Development Inventory

The Career Pattern Study model has been revised several times, prompted by both empirical evidence and refined theory (Super, 1977, 1983; Super & Knasel, 1979; Super & Ridd, 1979; Thompson & Lindeman, 1984). An updated version of the basic model is expanded to include the nonpaid-work roles that constitute a life career (Super, 1980, 1983). The principal dimensions of the updated model are: planfulness and exploration (attitudinal or conative); information and decision making (cognitive); and reality orientation (a mixture of both conative and cognitive) (Super, 1983; Super & Thompson, 1979).

Super's refined theory has two major ingredients: (a) life stages and their effect on human development

represented by individual progress through the stages defined by various life roles, and (b) how these stages interact with the personality (Osipow, 1990). This phenomenon is described according to Osipow (1990) in terms of the self-concept and various meta-concepts derived from the self-concept such as self esteem. The life stages are characterized by roles that exhibit specific vocational developmental tasks. An individual's progress in mastering the vocational tasks through the stages describes vocational maturity. Biological factors, though implied, are not variables to be studied and only set parameters as reflected in life-stage behavior. The environment in Super's refined theory is primarily defined relative to the stages the individual moves through caused by the demands the culture makes of one during each stage. The task of the investigator is to study two processes: mastery of the tasks of each stage and mastery of the forces from the self-concept as it develops. The theory attempts to predict both choice or occupational preferences and satisfaction with choice, with choice being the implementation of the self-concept in work (Osipow, 1990). Most of the research reported on this model supports Super's theory (e.g., Crites, 1978; Nevill & Super, 1988; Thompson & Lindeman, 1984). The developmental aspects of the theory are well documented. The research data, with regard to the self-concept, generally agree with the

theory and future prospects for the approach appear to be promising (Super, 1984).

Work Commitment

Two key constructs have emerged that have changed the course of developmental studies on career maturity. The notion of job involvement and career commitment have been cited as subjects of major investigations in an international study (Nevill & Super, 1988). The Work Importance Study (WIS), a project pursued by 10 countries, and coordinated by Super, has developed a model for the meanings of work and methods of investigating the centrality of work in several countries (Nevill & Super, 1988). Super (1983) noted that to people to whom work does not seem important, the attitudinal and cognitive factors that make up career maturity would seem irrelevant.

Kanungo (1982) in his review and synthesis of theory and research in work alienation and job involvement explicitly revealed that not everyone is work motivated. Questions raised regarding the usefulness of career development theory for African American and other minorities convey the inadequacy of current theories (Ford & Ford, 1978). The reasons for lack of work motivation or career orientation, according to Super (1983), are many, including the lack of awareness of any need to work and belief in the impossibility of finding a job. Considering

these factors and the negative impact of racial, sexual and class stereotypes, Super (1983) concluded that career decision making must involve more than career maturity but also motivation for a career.

Relationship Between Work Commitment and Career Maturity

The meaning of work in contemporary society varies considerably as aforementioned for a number of reasons. The Salience Inventory (SI) (Super & Nevill, 1983, 1984) has made it possible to objectively and reliably assess career commitment and to examine its relationship to other possible determinants of career maturity, and to career maturity itself. Super and Nevill (1984) examined determinants of career maturity with 382 high school subjects from a cross section of socioeconomic levels. The authors obtained measures of career and home commitment from the SI and measures of career maturity from the administration of the CDI. Results revealed no significant relationship between SES and career maturity as assessed by the CDI.

The extent and nature of the relationship between SES, gender, and Work Salience on the one hand and career maturity on the other were investigated. Gender was found to be related to some aspects of career maturity and not related to others. Girls scored slightly higher than boys on cognitive aspects of career maturity measured by the Decision Making (DM) and Knowledge of Preferred Occupation (PO) scales. Participation in and Commitment to Work were

related to Career Development Attitudes (CDI-Career Planning [CP] and Career Exploration [CE]), but not to Career Development Information. Commitment to Work was positively correlated with career maturity. Homemaking was related to gender. The relative importance attached to home and family roles was higher with girls than boys. While nearly 50 percent of the boys reported work as being more important than home and family, 36 percent of the girls reported work as being more important. However 50 percent of the girls attached more importance to home and family compared to nearly 38 percent of the boys on this measure. Finally, there was a small significant difference between the relative Commitment to Home and Family of males and females, with the girls being more often committed to home and family than to work, and boys more often more committed to work than to home and family.

Super and Nevill (1984) found it intriguing that Commitment to Homemaking and Family roles was slightly positively related to the career maturity variables of career planning and exploration. These findings suggest that persons thinking positively about these roles, whether males or females, tend to have aspirations and goals more than others in both the family and in the work spheres. Conversely, the Home-and-Family committed do not tend to acquire more occupational information. This finding reflects a common trend, according to Super and

Nevill (1984), that occupational information appears to be remote from the thinking of most high school students. This topic according to the authors is in need for further study (Super & Nevill, 1984).

Nevill and Super (1988) examined the relationship between career maturity, work salience, gender, socio-economic status, and college level, with 372 undergraduate students. The effect of commitment, gender, socioeconomic status and college level on various aspects of career maturity was measured with a series of multivariate analyses of variance. Socioeconomic status was not found to be related to career maturity in this study. Role salience was found to be related to subjects' gender. Female college students expressed more commitment to both work and home than did males. Commitment to work was found to be positively correlated to both the attitudinal and the cognitive factors of career maturity. Nevill and Super (1988) reiterated the important implications of the finding that work commitment is directly related to career maturity for career development theorists and practitioners. This finding is of utmost importance when working with the vocationally undecided or indecisive clients. Knowing how important work is to an individual, conclude Nevill and Super (1988), is essential in measuring readiness for vocational decision making. Knowledge of the construct of work salience provides

substance to scores on vocational interest inventories most commonly used in career counseling. Assessment of role importance has become a vital component of career counseling. The authors nevertheless recommend additional substantial research on role importance and on its relationship to education, vocational, leisure, and homemaking behavior.

Summary

A review of the literature concerned with the assessment of vocational readiness orientation supports the notion that research efforts in this area are necessary. It is apparent that vocational maturity is related to the degree of intellectual and cultural stimulation, one's aspiration to achieve higher socioeconomic levels, the ability to perform reasonably well academically and in a variety of activities, and the relative importance one attributes to work. It is also evident that differences exist between personality patterns, interests, and satisfactions gained in occupational endeavors.

CHAPTER THREE
METHODOLOGY

The purpose of this study was to investigate and compare the relationship between career maturity and commitment to work in alternative and regular high school students. To further the purpose of this study this chapter provides details of the study's hypotheses, subjects, instrumentation, procedures, and statistical applications.

Hypotheses

The following hypotheses were tested statistically:

1. Commitment to work as measured by both the Commitment to Work and Value Expectations in Work scales of the Salience Inventory is positively related to career maturity as assessed by the Career Development Inventory, School Form.

2. Participation in Work as measured by the Salience Inventory is positively related to career maturity as defined here.

3. Students attending an alternative high school will score significantly higher on measures of career maturity than will students attending a regular high school.

4. Students attending an alternative high school will score significantly higher on measures of work participation, commitment, and value expectations than will students attending a regular high school.

5. Students attending a regular high school will score significantly higher on measures of school participation, commitment and value expectations

than students attending an alternative high school.

Population

The subjects for this study were drawn from students attending two high schools in Seminole County, Florida. Students from both high schools represent a socioeconomic cross section of communities in Seminole County, a rapidly growing suburban area with significant agriculture, tourist, and aerospace industries.

One sample of students was drawn from an alternative high school, the Adult High School, which is located at Seminole Community College and enrolls approximately 400 students per semester. According to the Student Handbook (Seminole Community College, 1988) the school is designed to help students obtain a regular high school diploma in a setting and atmosphere that enables them to be treated like "adults." The school maintains a year-round academic schedule where individuals 16 years and older can enroll at the beginning or midpoints of any of the three terms. The school is accredited by the major accrediting agency for the southern area of the United States and the curriculum includes the traditional core of subjects offered in a regular public high school. Tuition and fees are free to the students; however, they are required to purchase their textbooks and provide their own transportation to and from school. The majority of the students who attend this alternative high school are self referred and are

attracted by the "adult" atmosphere, the possibility of completing high school more rapidly, and the shortened school day (most students attend from 8:00 a.m. to 12:00 noon, Monday through Thursday). The vast majority of the students have either full-time or part-time jobs. Permission for using a sample from this population was granted by the Director of the Adult High School and the Vice President of Student and Information Services at the Seminole Community College.

The second sample of high school students was drawn from students attending Seminole High School in Sanford, Florida. Seminole High School is the most representative high school in the county in terms of the ethnically diverse student population. The enrollment at Seminole High School during the winter term of 1990 was 1723. Permission was granted by the Vice Principal of Seminole High School and the School Board of Seminole County to conduct this study.

Sample

Two groups of subjects took part in the study: alternative high school students (n = 105) and regular high school students (n = 115). The students were second, third, and fourth year students enrolled in either the Adult High School or Seminole High School. The subjects were obtained from two sections each of English II, English III, and English IV classes. The specific classes

were designated by official institutional representatives, who used their best judgment in selecting comparable groups. No honor classes or special needs students were included in the study. Two hundred twenty packets were distributed to the subjects during two regular 50 minute classroom periods, allowing subjects approximately 100 minutes to complete the entire packet. Of the 220 packets administered 184 (83.6%) were returned completed and subsequently included in the study. One hundred four of the females (89%) and 80 of the males (79%) completed the entire packet. The rate of completion by school differed notably. Eighty of the 105 subjects (76%) at the alternative high school completed the packet while 104 of 115 subjects (90%) at the regular high school completed the battery of instruments. Portions of data from all 220 subjects were used in the analyses to provide robustness to the results of the study.

The alternative high school students were older, (x = 18.09 years) than the regular high school students (x = 16.5 years). The average amount of credits earned, 17.3 credits for the alternative high school and 12.1 credits for the regular high school reflected the age difference in students.

The finding that the groups differed in age is an issue which needs to be addressed. Consequently a post hoc inspection of the correlational matrix was done to

determine whether age was significantly related to any of the dependent variables on which the alternative and regular high school students were compared. Hypotheses 1 and 2 were not affected as they related to the subjects as a whole. However, Hypotheses 3, 4, and 5 compared the two groups. Hypothesis 3 compared the two groups on measures of career maturity: Career Development Attitudes (CDA), Career Development Knowledge (CDK), and Career Orientation Total (COT). Hypothesis 4 compared the two groups on measures of work importance: Participation in Work (PW), Commitment to Work (CW), and Value Expectations through Work (VW). Hypothesis 5 compared the two groups on measures of the importance of studying: Participation in Studying (PS), Commitment to Studying (CS), and Value Expectations through Studying (VS). Inspection of the correlational matrix revealed the correlations between age and the dependent variables were low (CDA, $r = .23$; CDK, $r = .12$; COT, $r = .23$; PW, $r = .12$; CW, $r = -.03$; VW, $r = -.05$; PS, $r = .11$; CS, $r = .24$; and VS, $r = .14$). Although the correlations between age and CDA, COT, and CS were sufficiently high to be of concern, overall the difference in age between the two groups did not effect the results. For example, an r of .24 would only account for 5% of the total variance. Since students in the alternative high school had self-selected to attend that high school, age was only one of many variables in the

constellation of attributes which accompanied that self-selection.

The groups also differed noticeably in the average number of hours employed away from home per week with the alternative high school students averaging 17.9 hours working per week compared to 7.44 hours on the average reported by the students attending the regular high school (see Table 1). Again the correlational matrix was consulted in the same manner as above. Correlations between the average number of hours employed away from home per week and the dependent variables were low (CDA, r = .10; CDK, r = .09; COT, r = .12; PW, r = .31; CW, r = .07; VW, r = .08; PS, r = .02; CS, r = .02; and VS, r = .12). Only the variable PW (Participation in Work) was significantly related to the hours employed. This positive correlation should be found as there should be a relationship between the two measures of student employment as measured by the Participation in Work scale of the Salience Inventory and the self-reported number of hours worked by the student. This finding serves as a validation of the Participation in Work scale of the SI.

When adjusting for the students who were actually working, data revealed that 50 alternative high school students (62.5%) worked an average of 28.65 hours per week. In comparison, 36 regular high students (35%) worked an average of 21.48 hours per week.

Table 1

Subjects by Age, Number of Credits Earned, and Number of Hours Employed Away from Home

Subject	Alternative High School (AHS)		Regular High School (RHS)	
	N	%	N	%
Age				
15 years	0	0%	16	15.4%
16 years	6	7.5%	30	28.9%
17 years	22	27.5%	43	41.3%
18 years	30	37.5%	15	14.4%
19 years	22	27.5%	0	0%
Total	80	100%	104	100%
X	18.09		16.48	
Academic Credit				
0-5	2	2.5%	8	7.7%
6-11	7	8.75%	38	36.6%
12-17	24	30%	26	25.0%
18+	47	58.75%	32	30.7%
Total	80	100%	104	100%
X	17.3		12.2	
Employment Status				
Employed	50	62.5%	36	35%
Unemployed	30	37.5%	68	65%
Average hours/week	17.9 hours		7.44 hours	
Adjusted average/week[a]	28.65 hours		21.48 hours	

[a]Adjusted average of hours worked excludes subjects not currently employed.

Of the 184 subjects, 80 (43.5%) were males and 104 (56.5%) were females. These percentages compare favorably to the population as a whole which is 49% male and 51% female (U.S. Department of Commerce, 1991). As shown in Table 2, socioeconomic levels, as assessed by a Personal Data Form (PDF) developed for this study, were similar in the two groups.

Evaluation of Table 2 shows that for both the alternative and the regular high school the largest group of subjects had parents who were employed at a "professional/ managerial" level. A further inspection of the data revealed that occupational levels for both parents were similar in the two groups.

More members of ethnic or racial groups were found at the regular high school than at the alternative high school. Forty-eight percent of the subjects at the regular high school were of African American heritage. Forty-four percent of the subjects were white and 8% were of Hispanic origin. The alternative high school subjects were more homogeneous. Seventy-seven percent were white, 17% were African American and 5% were of Hispanic origin (see Table 3).

The majority of subjects from both schools responded that they anticipated continuing their education by attending college or trade school. Ninety-five percent of the alternative high school subjects responded positively

Table 2

Subjects by Group and Occupational Level of Parents

	Professional Managerial		Clerical Sales		Skilled		Semi-skilled		Does Not Apply	
	N	%	N	%	N	%	N	%	N	%
Fathers										
AHS[a]	40	50%	6	7.5%	20	25%	5	6.25%	9	11.25%
RHS[b]	47	45.2%	4	3.8%	33	31.7%	9	8.7%	11	10.6%
Mothers										
AHS	30	37.5%	19	23.75%	13	16.25%	8	10%	10	12.5%
RHS	35	33.7%	20	19.2%	29	27.9%	6	5.7%	14	13.5%

[a]Alternative High School (AHS).

[b]Regular High School (RHS).

Table 3

Subjects by Ethnic or Racial Groups, Plans to Attend College, and to Transfer to the Alternative High School

	Alternative High School		Seminole High School	
Subject	N	%	N	%
Race				
White	62	77.5%	46	44.2%
Hispanic	4	5%	8	7.7%
Black	14	17.5%	50	48.1%
Plans to Attend College				
Yes	76	93%	89	85.6%
No	4	5%	15	14.4%
Plans to Transfer to AHS				
Yes	NA	NA	10	9.6%
No	NA	NA	94	90.5%

to this question as compared to 85.6% of the regular high school subjects.

The sample used in this study was a convenience sample, although efforts to stratify the sample were aimed at assuring diversity in representation. Tests of statistical significance were made under the assumption that the subjects included in this study constituted a representative sample of the population of high school students of Seminole County and Central Florida.

Instruments

New York State Self-Esteem Scale

Considering the influence that personality factors have on occupational choice the investigator elected to control for differences in the self-concept of the two sample populations of students. To accomplish this purpose the New York State Self-Esteem Scale (Rosenberg Self-Esteem, RSE) was used (see Appendix D). The RSE is a 10-item Guttman scale with a Coefficient of Reproductibility of 92 percent and a Coefficient of Scalability of 72 percent. It is the most widely used measure of its type (Rosenberg, 1979). Respondents were asked to strongly agree, agree, disagree or strongly disagree with each of the ten items. Each instrument was hand scored based upon an ingenious design by the author that brought about a 7-point scale. Scale Item I is composed of items 3, 7, and 9. Respondents answering 2 out of 3 or 3 out of 3

positively, receive a positive (that is, low self-esteem) score for Scale Item I. Scale Item II is composed of responses to items 4 and 5 and positive responses on either 1 out of 2 or 2 out of 2 responses are considered positive for Scale Item II. Scale Items III, IV and V are scored simply as positive or negative based upon respondents' answers to items 1, 8 and 10. Finally, Scale Item VI was formed from the combined responses to items 2 and 6, where one out of 2 or 2 out of 2 positive responses are considered positive or low self-esteem (Rosenberg, 1979). The highest possible score on the RSE is +6 which indicates high self-esteem, and the lowest is -6 which means low self-esteem or the lowest self-esteem measured by this instrument. Analysis of the results of the RSE showed no significant difference in the mean scores of the alternative high school students ($x = 3.85$) and regular high school students ($x = 4.38$),

t (184) = -1.4570, $p < .05$.

Personal Data Form

Personal characteristics of age, gender, race, socio-economic status(SES), and grade level (stratified by number of credits earned) were assessed by a Personal Data Form (PDF) developed for this study. Grade level in high school is indicated by total credits earned. Subjects with 0-5 credits are identified as first year students or freshmen, 6-11 credits sophomores, 12-17 credits juniors

and students with 18-23 credits are recognized as seniors. In Seminole County, Florida, 24 credits are required for graduation assuming the student meets the specific course requirements and grade point average. The PDF requested specific information on the occupational status of the parents of the subjects including job titles and duties. Each parent's occupation was coded according to the Warner Scale as revised by Hamburger (Super & Nevill, 1984). Finally, the PDF requested the last day of attendance in regular public or private high school of the students attending the Adult High School. The form itself is in Appendix A.

The Salience Inventory

The Salience Inventory was developed as a result of the Work Importance Study (WIS) launched by Super in 1976 (Nevill & Super, 1986). The WIS (group) is an informal consortium of autonomous research teams and members from countries in Europe, North America, Australia, Asia, and Africa. The objective of the Work Importance Study was to assess the values and satisfactions people seek in work and in other life-career roles and the relative importance of the work role in the context of other life roles (Nevill & Super, 1986). The WIS (group) developed an instrument to measure the salience of life roles when no psychometric instrument was found to assess this construct.

The Salience Inventory (SI) is a 170 item, 30-45 minute inventory that provides scores for participation in, commitment to, and value expectations of five major life roles: Student, Worker, Homemaker, Leisurite, and Citizen. The resulting 15 scales are: (a) Participation in the roles of Student, Worker, Citizen, Homemaker and Leisurite; (b) Commitment to each of the roles Student, Worker, Citizen, Homemaker and Leisurite, and (c) Value Expectations in each of the five roles of Student, Worker, Citizen, Homemaker and Leisurite.

The SI can be mailed to the publisher for scoring or it can be hand scored. For this study the SI was hand-scored by the investigator. To score the SI weighted values of each component are added up by column. The scale score is the sum of the numerical responses (1 to 4) for each of the items in the scale. The SI has gone through intense refinement and has been found to be a reliable instrument both in its internal consistency and stability. Nevill and Super (1986) report internal consistency (alpha coefficients) for high school and college samples at above .80. However, stability (test-retest) reliabilities of less than .70 were found for 10 of the 15 scales, with the Value Expectations scale having the lowest reliability (Nevill & Super, 1986). Since the reliabilities became increasingly lower as the test progressed and subjects complained of the repetitiveness of

the first version of the SI administered, fatigue or boredom may have caused random guessing by subjects in the study. To test the fatigue hypothesis, Nevill and Super (1986) gave the SI in either the regular sequence or in reverse order. Consequently, half of the subjects took pre- and post-tests in the normal sequence of Participation, Commitment, and Value Expectations, and half completed specially designed booklets which had a reverse sequence of Value Expectations, Commitment, and Participation. If the length of the tests in fact caused increasing amounts of random guessing, then subjects who took Participation first would get the highest test-retest scores on the Participation scale and the lowest scores on Value Expectations. The opposite would be true for those subjects taking the Value Expectations first. Commitment scores should remain the same. The findings were that regardless of whether the Value Expectations scale was given first or last, the reliabilities for this scale were lower than for either Participation or Commitment.

The SI has also demonstrated content and construct validity in the United States, Canada, Australia, Portugal, Spain, Italy, and Yugoslavia (Super & Nevill, 1983; 1984). Nevill and Super (1986) report that the content validity of the SI was an intrinsic part of its development because it was developed through an evaluation of the literature on life stages and career development on

real subject reactions. Nevill and Super (1984) found support for the construct validity of the SI in relation to gender and age differences in commitment to home and family for high school students. A positive relationship was found between being female and being committed to home and family ($r = .16$, $p < .01$). There was also a significant difference ($r = 6.57$, $p < .05$) in the relative commitment of high school male students and female students to the work and home and family roles, with males being more committed to work and females to the home and family. Different results were found for a sample of college students from two large southern universities. The point-biserial correlation between gender and commitment to home equalled only .14 ($p > .01$). Since positive scores showed correlations between being female and role importance, these results show that males and females do not differ in their relative commitment to work in comparison to home and family. Both groups had a much greater commitment to home and family than to work. The college females, however, did indicate more participation in home and family than did the college males. These changes in commitment to home and work from high school samples to college samples for males and females are logical and thus lend support to the validity of the SI (Nevill & Super, 1986).

The relative rankings of the five roles comparing the high school, college and adult samples also shows the

validity of the SI. Among high school students leisure was related as most important; work and home and family appear in the middle; studying and community service rated as least important. By college years participation in leisure activities was still rated as being important, but maturing role values can be seen in that greater importance was attributed to work and home and family. Participation in studying also tended to be higher as would be expected since the more serious students go on from high school to college (Nevill & Super, 1986).

Similar results for adults were found by Yates (1985) in his study of 321 students enrolled in an off-campus baccalaureate degree program conducted by a major midwestern university. He found the expected gender-role, marital status, and age differences. Females showed a greater participation in home and family activities, maintained a stronger commitment to work, to community affairs, and to the home and family, and sought greater satisfaction from activities related to the community and to the home and family than did males. Married respondents indicated a greater participation in, a stronger commitment to, and placed greater value on home and family activities than did unmarried respondents. Unmarried respondents indicated greater participation in leisure activities, a greater commitment to community and leisure pursuits, and sought greater satisfaction from their

involvement in community and leisure activities than did married respondents. As expected the youngest age group, 17 to 25, participated the most in leisure activities, were most committed to them, and indicated the strongest leisure-related expectations.

Ellermann and Johnston (1988) also found expected differences between female college seniors who were traditional academic majors (special education, nursing, and home economics) and those in nontraditional academic majors (pre-medicine, engineering, and business). They found that women who were currently in nontraditional majors, though they did not significantly differ from their counterparts in traditional majors in commitment to work, were significantly less committed to home and family.

Validity of the SI can also be shown by the inter-scale correlations. In the norming sample of 3,347 high-school students, the correlations between the Participation and Commitment scales are .76 for Study, .53 for Work, .76 for Community, .63 for Home and Family, and .70 for Leisure Activities. The correlations between the Participation and the Value Expectations scales are .64, .43, .66, .57, and .63, respectively. The correlations between Commitment and Value Expectations scales are .77, .72, .81,.77, and .79, respectively. Both the Commitment scale and the Value Expectations scale measure Commitment.

Thus they are theoretically similar, but use a different format. The Participation scale is theoretically different from the other two scales. The two scales (Commitment and Value Expectations) which are theoretically more similar are more highly correlated than those two are to the third variable (Participation) which is theoretically different. Similar relationships hold for the university and adult samples. These findings are good evidence for both the convergent and the divergent validity of the scales (Nevill & Super, 1986).

The Career Development Inventory

Career maturity attitudes and knowledge were assessed with The Career Development Inventory (CDI) which had its theoretical beginnings in the basic research on the nature of career maturity (Hansen, 1985; Super & Nevill, 1984). The CDI is intended to assess vocational or career maturity and career development (Hansen, 1985; Thompson & Lindeman, 1981). The current study used the School Form of the CDI, which was designed for junior high and high school students (Appendix C). Based upon the theoretical model developed and tested by the Career Pattern Study the CDI measures four basic dimensions of career maturity: (a) Planfulness, (b) Exploration, (c) Decision Making and (d) Information. These dimensions are measured on five basic scales: Career Planning; Career Exploration; Decision Making; World of Work Information and Knowledge

of Preferred Group. The scales of Career Planning and Exploration can be combined to form an Attitudes scale. Decision Making and World of Work Information can be combined to form a Career Development Knowledge scale. A Career Orientation Total can be obtained by combining the Career Development Attitudes and Knowledge scales.

The CDI is computer scored and the results are reported in standard scores with means set equal to 100 and standard deviations equal to 20 (Hansen, 1985). The norms for the School Form were based on a sample of 5,039 high school students. The computer printout scale scores can be transformed to raw score equivalents. To derive raw scores for Career Planning, responses A to E are scored 1 to 5, and the total score is the sum of the values for the 20 items. For the Career Exploration scale responses A to D are given values of 1 to 4. Each item is then assigned a weight according to the determined quality of the resource. The score is the response value multiplied times the item weight. For the Decision Making, World of Work Information, and Knowledge of Preferred Occupational Group scales, the score is simply the total number of items answered correctly (Thompson & Lindeman, 1981).

According to Hansen (1985) six of the eight scales have adequate reliability (internal consistency). Thompson and Lindeman (1981) report reliabilities as

follows for high school seniors: Career Planning (CP) .89; Career Exploration (CE) .77; Decision Making (DM) .64; World of Work Information (WW) .85; Knowledge of Preferred Occupational Group (PD) .66; Career Development Knowledge (CDK) .86; and Career Orientation Total (COT) .85. The two scales DM and PD have internal consistency values low enough to warrant caution in their use (Hansen, 1985; Thompson & Lindeman, 1981). The stability (test-retest) of the CDI was assessed on five separate scales, CP, CE, DM, WW, and PD. These CDI scales were administered twice within a three week time interval to a total of 668 9th, 11th and 12th grade students. With few exceptions results indicated correlations in the 70s and 80s for the combined scales (CDA, CDK, and COT) and for scale CP. For the remaining scales correlations were in the 60s and 70s which is still indicative of satisfactory stability over a three-week interval (Thompson & Lindeman, 1984).

According to Thompson and Lindeman (1981) the CDI has demonstrated its content validity by having items that qualified judges viewed as dealing with those variables that are to be measured. The CDI is based on the theoretical model that was developed and tested by the Career Pattern Study. Eight out ten experts agreed that the items in the CDI appeared to be such as prescribed by the model.

Thompson and Lindeman (1981) provide further support for the construct validity of the CDI. The authors report findings that demonstrate the developmental characteristic of career maturity. As students progressed from the 9th to the 12th grade means on all separate and combined scales of the CDI increased. The authors report additional support for the construct validity of the CDI scales in its ability to predict differences among academic programs. For example, students in honors programs had higher mean scores, particularly on the cognitive scales than did students in regular classes. Students in college preparatory and business programs tended to have higher scores than those in general and vocational programs. This information provides further evidence of the construct validity of the CDI scales (Thompson & Lindeman, 1981).

Procedure

The Personal Data Form, the Salience Inventory, and the Career Development Inventory were explained to each class of students before the writer administered the instrument. The Personal Data Form and the Salience Inventory were given consecutively on the first day of testing and the Career Development Inventory was administered on the second day. Subjects were given adequate time to complete the tests, and the CDI's were mailed off to Consulting Psychologists Press for scoring.

For the purpose of this study only a portion of the Salience Inventory was used. Subjects were instructed to respond to questions under Participation, Commitment and Values Expectations only as they related to their roles as workers and as students. Instead of 170 items, subjects only responded to 68 items on the inventory. Special care was taken while proctoring the test to assure that the subjects were following the special instructions. The Salience Inventory was hand scored and yielded two scores on each of the three scales, Participation in the Worker and Student roles, Commitment to, and Value Expectations for each of the roles.

The study used the two summative scales, Career Development Attitudes (CDA) and Career Development Knowledge (CDK), and the more global composite scale for Career Orientation Total (COT), of the Career Development Inventory (CDI).

Analysis of Data

The following statistical methods were used to analyze the data:

1. A correlational analysis was used to examine relationships among the various measures to more rigorously analyze across and within group differences on the scales of the CDI and the SI (Hypotheses 1 and 2).

2. An analysis of variance (ANOVA) was used to analyze differences in career maturity levels of

alternative high school and regular high school students. Further statistical testing using Scheffe's tests were applied to find the location of significant differences (Hypothesis 3).

3. A analysis of variance (ANOVA) was used to analyze differences in commitment to work and value expectations through work of the two groups of high school students. When the ANOVA proved significant, separate analyses of variance were conducted for each dependent measure. The Scheffe's procedure was used to find the location of significant differences (Hypothesis 4).

4. A analysis of variance (ANOVA) was used to analyze differences in Participation, Commitment, and Value Expectations in their roles as students of the two groups of high school students. When the ANOVA proved significant separate analyses of variance were conducted for each dependent measure. The Scheffe's procedure was used to find the location of significant differences (Hypothesis 5).

The .05 (5%) level of significance was used in this study. The Statistical Analysis System (SAS) at the University of Florida was used to analyze the data.

CHAPTER FOUR
RESULTS

The study was designed to investigate and compare the differences between career maturity and work and study salience in alternative and regular high school students. Career maturity was assessed by the Career Development Inventory (CDI) and work and study salience or commitment to work/study was assessed by the Salience Inventory (SI). Tables 4 through 19 summarize data contained in this study. Five research hypotheses were investigated in this study:

1. Commitment to work as measured by both the Commitment to Work and Value Expectations in Work scales of the Salience Inventory (SI) is positively related to career maturity as assessed by the Career Development Inventory, School Form (CDI).

2. Participation in work as measured by the SI is positively related to career maturity as measured by the CDI.

3. Students attending an alternative high school will score significantly higher on measures of career maturity than will students attending a regular high school.

4. Students attending an alternative high school will score significantly higher on measures of work participation, commitment, and value expectations than will students attending a regular high school.

5. Students attending a regular high school will score significantly higher on measures of school participation, commitment and value expectations

than will students attending an alternative high school.

The data were analyzed utilizing SAS software and three primary statistical procedures: two-way analysis of variance on all dependent variables, partial correlations using Pearson product-moment correlation, and means and standard deviations by groups. Scheffe's multiple comparison procedure was also used as a post-hoc test. In this chapter the effect of each of the independent variables, their interactions, and covariables are discussed.

Analyses of Product-Moment Correlations for Hypotheses One and Two

The first hypothesis predicted a positive relationship between Commitment to Work and Value Expectations through Work on the SI and career maturity as assessed by the CDI. The second hypothesis predicted that Participation in Work would be positively correlated to career maturity. For the purposes of this study the two summative scales of the CDI, Career Development Attitudes (CDA) and Career Development Knowledge (CDK), and the more global scale Career Orientation Total (COT) were used for comparison. The results, as shown in Table 4, do not support the first hypotheses. There was no significant relationship between Commitment to Work and Value Expectations through Work and any of the three summative scales on the CDI (Career Development Attitudes, Career Development Knowledge, and Career Orientation Total). It

appears that, at this age, maturity as measured by the CDI was not related to students' commitment to their roles as workers nor to the values they expect to realize through the work role.

Table 4

Correlations between Career Maturity and Commitment to, Value Expectations through and Participation in Work

Correlations for CDI Summative Scales			
Variables	CDA	CDK	COT
CW	.12	.02	.08
VW	.15	.12	.17
PW	.24*	.15	.24*

*Absolute values of .19 or larger are significant at the .05 level (two tailed).

The second hypothesis was supported. Participation in Work was found to be moderately correlated with the summative scale of the CDI, Career Development Attitudes ($r = .24$), and the global scale Career Development Total ($r = .24$). This finding lends some support for previous research on work salience. Thus the more students were found to participate in work the higher was their level of career maturity.

In comparing correlations between career maturity and Commitment to, Value Expectations through and

Participation in Studying analysis showed correlations of even greater magnitude between variables on the CDI and SI. Although not a formal hypothesis the relationship between career maturity and measures of the importance of studying were noted. The results reported in Table 5 show a consistent positive relationship between Commitment to, Value Expectations through and Participation in Study and all three of the summative scales of the CDI, Career Development Attitudes, Career Development Knowledge, and Career Orientation Total. Students who are committed to their roles as students, who anticipate value through this role, and who participate more in study are more career mature. Thus for the students included in the current research there is a stronger relationship between the importance of studying and career maturity than between the importance of work and career maturity.

Table 5

Correlations between Career Maturity and Commitment to, Value Expectations through and Participation in Studying

	Correlations for CDI Summative Scales		
Variables	CDA	CDK	COT
CS	.22*	.21*	.28*
VS	.35*	.19*	.34*
PS	.39*	.21*	.38*

*Absolute values of .19 or larger are significant at the .05 level.

Analyses of Variance for Hypothesis Three

The third hypothesis predicted that students attending the alternative high school would score significantly higher on measures of career maturity than students attending the regular high school. The ANOVA results on the three summative scales of the CDI are presented in Tables 5, 6, and 7. The data were analyzed by group (alternative versus regular high school students). In addition, although not included in the hypothesis, the data were analyzed by gender and group by gender (Tables 8, 9, 10, and 11).

Hypothesis 3 was supported convincingly by the data. Alternative high school students scored significantly higher on two of the three scales (the summative scale Career Development Knowledge and the global scale Career Orientation Total) of the CDI. When the analysis was done by gender, female students scored significantly higher than male students on all three scales of the CDI. When both high school and gender effects were analyzed together only the measure of career attitudes (CDA) showed significance. Female subjects at the alternative high school were significantly more mature than male subjects at the regular high school on the CDA measure of career maturity of the CDI, F (3,183)=4.0035, $p < .05$. Female subjects at the regular high school also scored significantly higher on this measure than males at the regular high school as

Table 6

The Effect of Alternative or Regular High School Attendance on Measures of Career Maturity (n = 183)

CDI Scale	Sum of Squares	df	F	Significance
CDA	951.60	1	2.69	0.10
CDK	3462.72	1	9.13	0.0029
COT	3297.33	1	9.54	0.0023

Table 7

Means and Standard Deviations of Career Maturity Measures by Group

			CDI Scale		
	N	Statistic	CDA	CDK	COT
Alternative High School	80	Mean	108.98	99.46	104.59
		SD	18.84	21.65	20.13
Regular High School	104	Mean	104.41	90.71	96.05
		SD	19.74	18.31	18.55

Table 8

The Effect of Gender on Measures of Career Maturity (n = 183)

CDI Scale	Sum of Squares	df	F	Significance
CDA	3135.01	1	8.86	0.0033
CDK	3203.33	1	8.45	0.0041
COT	3297.33	1	14.42	0.0002

Table 9

Means and Standard Deviations of Career Maturity Measures by Gender

			CDI Scale		
	N	Statistic	CDA	CDK	COT
Males	80	Mean	101.47[a]	89.26[a]	93.35[a]
		SD	19.33	19.07	18.29
Females	104	Mean	110.22[b]	98.56[b]	104.69[b]
		SD	18.74	20.29	19.34

Note. Means with different superscripts in each column differ significantly at $p < .05$.

Table 10

The Effect of Alternative or Regular High School Attendance by Gender on Measures of Career Maturity (N = 183)

CDI Scale	Sum of Squares	df	F	Significance
CDA	1381.72	1	3.90	0.0497*
CDK	89.23	1	0.24	0.6282
COT	301.81	1	0.87	0.3512

Table 11

Means and Standard Deviations of Career Maturity Measures by Group by Gender

			CDI Scale		
	N	Statistic	CDA	CDK	COT
Alternative High School Males	30	Mean	107.87	93.13	99.90
		SD	17.02	20.92	18.26
Regular High School Males	50	Mean	97.71[a]	86.94	89.42
		SD	19.77	17.68	17.31
Alternative High School Females	50	Mean	109.66[b]	103.26	107.40
		SD	19.99	21.39	20.84
Regular High School Females	54	Mean	110.74[b]	94.20	102.18
		SD	17.67	18.34	17.67

Note. Means with different superscripts in each column differ significantly at $p < .05$.

well, $F(3,183)=3.3646$, $p < .05$. Alternative high school males mean scores were not significantly different from those of either of the female subjects at the alternative high school or the female subjects at the regular high school. In addition there was no significant difference in mean scores between males at the alternative high school and the regular high school on the CDA scale of the CDI. In summary, females were more mature on the CDI measures than males with the exception of the CDA where alternative high school males were not significantly less mature than either alternative or regular high school females.

Analysis of Variance for Hypotheses Four and Five

The fourth hypothesis predicted that students attending the alternative high school would score higher on measures pertaining to work on the SI, including Participation in Work, Commitment to Work and Value Expectations through Work, than would students attending the regular high school. These results are shown in Tables 12, 13, 14, 15, and 16.

The fourth hypothesis was partially supported by the data, with statistically significant differences between alternative and regular high school students on two of the three scales of the SI assessing work. Alternative high school students reported greater participation in and commitment to work than did students who attended the

Table 12

The Effect of Alternative or Regular High School Attendance on Measures Pertaining to Commitment to Work and Study (N = 198)

SI Scale	Sum of Squares	df	F	Significance
PW	417.17	1	9.33	0.0026*
CW	250.37	1	4.87	0.0285*
VW	121.40	1	1.15	0.2854
PS	67.83	1	2.28	0.1323
CS	485.83	1	12.55	0.0005*
VS	405.25	1	4.54	0.0343*

Table 13

Means and Standard Deviations of Commitment to Work and Study Variables by Group

			SI Scale					
			Work Variables			Study Variables		
	N	Statistic	PW	CW	VW	PS	CS	VS
Alternative High School	85	Mean	25.87[a]	31.85[a]	43.71	23.49	29.35[a]	39.67[a]
		SD	6.19	7.49	11.49	5.53	6.28	9.72
Regular High School	113	Mean	22.94[b]	29.57[b]	42.12	22.31	26.19[b]	36.81[b]
		SD	7.03	6.99	9.51	5.45	6.38	9.59

Note. Means with different superscripts in each column differ significantly at $p < .05$.

Table 14

The Effect of Gender on Measures Pertaining to Commitment to Work and Study (N = 198)

SI Scale	Sum of Squares	df	F	Significance
PW	24.53	1	0.55	0.4597
CW	208.79	1	4.06	0.0452*
VW	489.00	1	4.62	0.0328*
PS	99.30	1	3.34	0.0690
CS	255.49	1	6.60	0.0110*
VS	871.21	1	9.76	0.0021*

Table 15

Means and Standard Deviations of Commitment to Work and Study Measures by Gender

			SI Scale					
			Work Variables			Study Variables		
	N	Statistic	PW	CW	VW	PS	CS	VS
Males	88	Mean	23.61	29.26[a]	40.95[a]	21.97	26.11[a]	35.56[a]
		SD	6.32	7.52	10.38	5.60	6.73	9.71
Females	110	Mean	24.66	31.58[b]	44.28[b]	23.51	28.72[b]	40.06[b]
		SD	7.20	6.94	10.23	5.35	6.11	9.30

Note. Means with different superscripts in each column differ significantly at $p < .05$.

Table 16

The Effect of Alternative or Regular High School Attendance by Gender on Measures Pertaining to Commitment to Work and Study (N = 198)

SI Scale	Sum of Squares	df	F	Significance
PW	65.25	1	1.46	0.2284
CW	13.19	1	0.26	0.6129
VW	197.32	1	1.87	0.1736
PS	30.40	1	1.02	0.3129
CS	98.48	1	2.54	0.1124
VS	50.68	1	0.57	0.4520

regular high school (Tables 12 and 13). There were no differences reported between the two groups on the measure of value expectations through work.

The fifth hypothesis predicted significant group differences on measures of school participation, commitment, and value expectations. Alternative high school students were predicted to score higher on Participation in Studying, Commitment to Studying, and Value Expectations through Studying on the SI. This prediction was not supported by the data in Tables 12 and 13. There were significant differences between alternative and regular high school students relative to Commitment to Studying and Value Expectations through Studying. However, contrary to predictions, alternative high school students had higher mean scores on each of the three scales measuring this concept. In the scales of Commitment to and Value Expectations through Studying this difference reached significance. Students at the alternative school were more committed to and expected to realize more values through studying than did students who attended regular high school. However, no differences were found between the two groups in the amount of studying done. Hypothesis five was not supported.

Although not a part of either Hypothesis 4 or 5, gender differences were also noted. Females scored significantly higher than males on the work variables of

Commitment to Work and Value Expectations through Work and the study variables of Commitment to Studying and Value Expectations through Studying (Tables 14 and 15). No significant interactions were found (Tables 16 and 17).

Profile Types

The CDI yields two composite scales, Career Development Attitudes (CDA) and Career Development Knowledge (CDK). The CDA scale is a summative scale combining scores on two subscales Career Planning (CP) and Career Exploration (CE). This scale is heavily loaded with factors that are conative or attitudinal. The CDK scale combines Decision Making (DM) and World-of-Work Information (WW) and assesses knowledge of how to make career decisions including world of work knowledge and other cognitive factors related to career development (Thompson & Lindeman, 1984). It might be valuable to examine the relative scores on these two scales to see whether the individuals in a particular group exhibited similar or differing levels of development in these two major aspects of career development. Using the total norming group of high school students Thompson and Lindeman (1984) proposed the following categories of scores to define high, medium, and low profile types (see Table 18).

Applying these criteria to the mean scores of the two sample groups in this study reveals a high CDA average

Table 17

Means and Standard Deviations of Commitment to Work and Study Measures by Group by Gender

			SI Scale					
			Work Variables			Study Variables		
	N	Statistic	PS	CW	VW	PS	CS	VS
Alternative High School Males	32	Mean	24.56	30.94	40.22	23.18	28.97	37.82
		SD	6.25	8.59	12.94	6.31	7.10	11.11
Regular High School Males	56	Mean	23.07	28.30	41.37	21.25	24.43	34.23
		SD	6.35	6.74	8.69	5.05	5.95	8.61
Alternative High School Females	53	Mean	26.66	32.40	45.81	23.68	29.58	40.85
		SD	6.08	6.77	10.07	5.04	5.77	8.65
Regular High School Females	57	Mean	22.81	30.82	42.86	23.35	27.93	39.33
		SD	7.70	7.07	10.27	5.66	6.35	9.89

Table 18

Normal Distribution of CDI Summative Scores for High School Students

	CDI Scale	
Category	CDA	CDK
High (H)	109-166	113-140
Medium (M)	91-108	93-112
Low (L)	25-90	42-92

score for the alternative high school sample and a medium score for the regular high school sample (Table 19). Thus students who attended the alternative high school were better able to engage in career planning and to understand the use of career information resources than those who attended the regular high school. Both groups fell into the medium category in the CDK aspect of career development. Overall, and at each school, female students scored in the high category on the CDA scales, while males scored in the medium category overall and at each school. Thus females scored as more mature in the career development attitudes than did males in all three comparisons. Overall, and at each school, female students scored in the medium category on the CDK scales, while males scored in the low category at the regular high school and in the medium category at the alternative high school. Females tended to have more advanced ability to apply the principles of career planning to a variety of situations and they knew more about the world of work than did males. Males who attended the regular high school seemed particularly deficient in their career development knowledge. Overall, students were more mature in their career development attitudes than their career knowledge.

Summary of Results

1. Work importance as measured by the Commitment to Work and the Value Expectations through Work scale of the

Table 19

A Comparison of Mean Scores on the Composite Scales of the CDI for Alternative and Regular High School Students

Group	CDI Scale	
	CDA	CDK
Alternative High School	109 (H)	99 (M)
Regular High School	104 (M)	91 (M)
Alternative High School Males	108 (M)	93 (M)
Alternative High School Females	110 (H)	103 (M)
Regular High School Males	98 (M)	87 (L)
Regular High School Females	111 (H)	94 (M)
All Males	101 (M)	89 (L)
All Females	110 (H)	99 (M)

Salience Inventory was not significantly correlated with the Career Development Attitudes, Career Development Knowledge or the Career Orientation scales of the CDI. Thus the level of students' commitment to work or expectation to realize their values through work was not significantly correlated with their ability to plan and explore various career options and their overall level of career maturity.

2. The behavioral component of the measures studied, Participation in Work, was significantly correlated with two summative scales of the CDI, the Career Development Attitudes scale, and the more global scale assessing career maturity, Career Orientation Total scale. A subject's involvement in work was significantly related to (a) the career development attitudes necessary for planning and career exploration, and (b) the overall career maturity as measured by the composite scale COT. This hypothesis received partial support.

3. The alternative high school students scored significantly higher on two of the three CDI summative scales including the CDK scale that assesses the ability to make career decisions and the knowledge of the world of work and the COT scale which is an overall measure of career maturity. The hypothesis received strong support. Students who attended the alternative high school were more career mature than those who attended the regular

high school. A subsequent analysis of profile types suggest that the low scores of the males attending the regular high school accounted for much of the difference between the groups. Females scored significantly higher on all three measures of career maturity than did males.

4. Alternative high school students had significantly higher participation in work and their attitudes revealed a significantly higher commitment to their roles as workers than did regular high school students. However, no differences were found in "the degree to which major life satisfactions or values are expected to be found in the role as worker" (Nevill & Super, 1986, p.11). The hypothesis received partial support. Females were more committed to work and expected to realize more values through work than did males. However, the sexes did not differ in work participation.

5. Unexpectedly, alternative high school students were significantly more committed to and expected to find a greater degree of satisfaction in their roles as students than did regular high school students. However, there was no significant difference in the amount of involvement or participation in study as reported by the two groups. The hypothesis was not supported. Females were significantly more committed to studying and expected to realize more values through studying than did males.

However, the sexes did not differ in the amount of time they spent in studying.

6. Applying the profile type criteria to the mean scores of the two sample groups revealed consistently higher relative scores for alternative high school students in comparison to scores of regular high school students. Female students overall scored higher on scales that reveal attitudinal factors and alternative high school females scored higher than both male groups on scales that revealed cognitive factors, as well. Female students were more career mature both in applying the principles of career planning and in their knowledge of making decisions in the world of work.

CHAPTER FIVE
DISCUSSION

This chapter is divided into two main sections: (a) evaluations of high school students' attitudes and skills to make career choices and plans, and (b) implications, recommendations, and conclusions. In the first section the results of this study are reviewed and discussed. In the second section, the overall implications, recommendations, and conclusions of this study are presented.

The present study was to determine if there were significant differences between alternative and regular high school students on measures of career maturity and commitment to work and study. These groups of high school students were compared on the basis of nine variables. The variables included the three summative scales of the CDI (Career Development Attitudes, Career Development Knowledge, and Career Orientation Total) and six scales of the Salience Inventory (SI) (Commitment to Work, Value Expectations through Work, Participation in Work, Commitment to Study, Value Expectations through Study, and Participation in Study).

Relationship between Career Maturity and Role Importance

The investigation first looked at the relationship between career maturity and role importance. It was noted that in previous studies using high school students, results showed significant relationships between work commitment and career development attitudes, but not between work commitment and career development knowledge (Super & Nevill, 1984). The results of the current study do not lend definitive support to those previously reported findings. No significant relationship was found between career maturity and either commitment to work or values realization through work. However, career development attitude scores were more closely related to work commitment than were career development knowledge scores. Super and Nevill (1984) proposed that the identified relationship between work commitment and career development attitudes is likely to be a function of the stage of career development typical of high school students. In comparison, Nevill and Super (1988) found commitment to work to be related to both career development attitudes and career development knowledge in university students. Findings in this study support this relationship and tendency toward change in commitment to work. Older students, the alternative high school sample, were more career mature and there was less difference based upon gender within this group.

Although not included in the hypotheses, the relationship between both Commitment to Study and Value Expectations through Study and the summative scales of the Career Development Inventory was examined. Significant relationships were found among all scales. Commitment to study and students' expectations to realize values through study were both significantly related to both career development attitudes and career development knowledge. This finding was of particular interest, and quite logical in that all of the subjects were actively enrolled in school and over 90% of the subjects planned to attend college or vocational school after graduation.

The finding that career maturity was more strongly related to commitment to and value realization through study than to work suggests an awareness by the students of their personal immaturity with regard to career development and their ignorance of the real world of work, such as job requirements, duties, and way of life. Instead they express a commitment to the process most familiar to them, school and education, for obtaining the information they need about careers and labor market realities. Considering the limited and erratic knowledge of the world of work seen in this age group, it is promising to see a strong relationship between commitment to study and career maturity. Timing may be a critical factor in career development and students committed to

utilizing the formal educational process may be more likely to be successful in their career pursuits. Over time, commitment to study may influence students' attitudes regarding the importance of work.

Participation in work as measured by the Participation in Work scale of the SI was related to the career attitude scale and the more global measure of career maturity, Career Orientation Total scales of the CDI. This finding suggests a relationship between increased involvement in work and being more conscientious in regard to career development attitudes and overall vocationally mature behaviors. High school students more involved in work seem to look ahead more (Career Planning) and explore more career options (Career Exploration) than less involved students.

Although not included in the hypotheses the relationship between Participation in Study on the SI and the summative scales of the CDI was evaluated. Participation in Study was significantly related to all three of the composite scales on the CDI. Again, this finding was of interest in that it implies an increased tendency for more responsible and successful career development attitudes and behaviors with increased involvement in school and study.

A Comparison of Alternative and Regular High School Students

Alternative high school students were more career mature than regular high school students. These results lend support to several notions: first, older students appear to be more mature vocationally; second, students more involved in or participating in work are more mature vocationally; and third, the choice by a student of either an alternative or regular high school is related to both the student's age and number of hours actively involved in work.

Further analyses not included in this hypothesis show considerable difference between males and females in career maturity levels. Female students scored significantly higher than male students on all three of the career maturity variables. Previous studies have reported females scoring higher in career maturity than males, however, usually only on the cognitive factor or career development knowledge (Nevill & Super, 1988). It seems that females may mature earlier with regard to career development attitudes, knowledge, and behaviors than do males. A significant interaction of gender and high school group was found. As discussed earlier, the low scores of the regular high school males contributed significantly to group differences.

Significant differences were found between high school groups in participation in work and commitment to

their roles as workers. There was little difference between alternative and regular high school students on the valuation through the work role. An explanation for why alternative high school students were more involved in and more committed to their roles is the fact that significantly more of them held regular jobs. Unexpectedly, there was little difference in value expectation through work between the two groups. Apparently both groups agree regarding the value of work in general and the degree to which major life satisfactions or values can be expected to be found in the work roles (Nevill & Super, 1986). The attitudes appear to be independent of age or participation in work.

Closer examination of group differences shows considerable gender difference in the attitudinal components of work importance, commitment and value expectations. While males and females participated equally in work, females were much more committed to their roles as workers and expected to realize more satisfaction and other values than males through the work role. This finding supports other studies in gender differences in career aspirations, motivations, attitudes, and choices (Austin, 1989).

This investigation did not show support for the hypothesis concerning participation in, commitment to, and value expectations through study. Unexpectedly, considerable difference was found between the two groups with

alternative high school students being more committed to their roles as students. There was little difference between alternative and regular high school students on the behavioral component of participation in study.

Again, females were more committed to study and expected to realize more value through study than did the male high school students, though the sexes did not differ in the amount of studying. Females in general show a higher level of commitment. Farmer (1983) found that high school girls scored higher than boys on both commitment to work and commitment to home. In a cross-cultural study of adolescent perceptions of work and home Nevill and Perrotta (1985) found that females in Australia, Portugal, and the United States were more committed to work and to home than were males. Thus a higher level of commitment to study would not be surprising. Whether these findings represent an emotional commitment to the roles, generalized feelings of responsibility, tendencies to persevere, or a willingness to admit to higher levels of commitment in general, is undetermined.

The fact that the alternative high school students were more committed to their roles as both workers and students may be explained by the difference in the overall maturity level of this group. They were older, more likely to be employed, worked more hours, and were vocationally more mature and committed to work. An

examination of the relative scores and profile types also lends support for the differing levels of development in the two groups. Alternative high school students exhibited greater maturation in both the attitudinal and the cognitive aspects of career development. The idea that these alternative high school students were "trading down" or "copping out," attempting to find an easy way out, was not supported. These students appear to be serious and mature about where they are going and how they will get there. Their chosen alternative approach seems to be just that, a different way of accomplishing some mature life goals.

Implications

The study was successful in that it added to our understanding of the relationship between school choice and career maturity and commitment to work and study. The high school sample used in this study is particularly important in that it included a relatively underinvestigated group of students, those who attended an alternative high school. Both the alternative and the regular high school groups were broadly representative of the area, with appropriate proportions of males and females, a cross section of individuals from different social, economic, and ethnic groups. However, the alternative high school sample was older by one-and-a-half years and had earned five more credits (the equivalent of one academic year)

than the regular high school students. Although the age difference accounted for, at most, only 5% of the variance, it would be desirable to study groups of alternative and regular high school students who were the same age and academic standing comparing career maturity and commitment to work and school.

The findings of this study have important implications for career education, career assessment, evaluation, research, and the practice of career counseling. This study has added to the understanding of the effects of increased participation in work by high school students in their roles as students and workers. The research study pointed out that students who chose to attend an alternative high school and to work significantly more hours per week were not only more committed to their roles as workers, but also to their roles as students. In addition alternative high school students showed higher levels of vocational maturity on both the attitudinal and cognitive dimensions.

This study has critical implications for career education and guidance programs in high schools. The study's findings underscore the importance for school personnel to know the planning ability of their students. The use of the CDI and the SI will provide data on these variables (Thompson & Lindeman, 1984). Super and Nevill (1984) suggest that an awareness of how motivated students are to

pursue the world of work and their knowledge of how to pursue it are essential to planning the career education program best suited for particular students. Needed data include: (a) what students have done in planning their careers, (b) how much they know about their preferred occupations in general, and (c) how much they know about where to turn for assistance. Information regarding the relative importance of work is valuable in assessing what scores mean on other career assessment devices. In the case of the current study significant differences were found between the two student samples in their valuing of work and study. Because of these differences career education and counseling at the two schools should take different forms. School programs should be intentionally shaped to be relevant to the students' needs and readiness.

This study also has important implications for the use of assessment devices in career planning and evaluations in general. Ivey (1984) suggests that effective assessment leads to effective helping and that defining the problem is, virtually, the beginning and end of problem solving. This study adds credence to the importance of systematic assessment and problem definition versus diagnosis and labeling. Often alternative high school students are labeled as "drop-outs," "cop outs," "losers," and "underachievers." However, the current study clearly

showed that students who attended an alternative high school were more career mature and more committed to both work and study than were students who attended regular high school. Alternative high school students are clearly highly motivated. Thus, when given the opportunity for a "problem-definition assessment," as described by Ivey (1984), by using a developmental approach as indicated by this study, counselors' efforts are more likely to lead to action that is both meaningful and effective to the clients.

Savickas (1989) acknowledged the need to extend ongoing research programs in the area of career assessment. This study showed the usefulness of assessment instruments based on career development theory and supports continued development of two career assessment instruments (the SI and the CDI) which are now ready for use in the practice of developmental career counseling (Super & Nevill, 1984).

Recommendations

Based upon the findings of the present investigation, further exploration of the effect of gender, age, and ethnic or cultural group on career maturity and commitment to work and study may prove worthwhile. In future research, however, it is recommended that the number of earned credits and number of hours working away from home be controlled. Since age appears to be a critical factor

in career maturity and grade level and number of earned credits is related to age, better control of these variables is needed. The age and grade level of students are two possible confounding factors, and further efforts to discern which factors actually do influence differences in career maturity and commitment to work and study between different school groups, ethnic groups, or gender are desirable.

A second recommendation would be to control for the number of hours employed per week away from home. It may well be that working a few hours per day is more beneficial than a 40-hour a week job and that too much work not only affects the time students have to study but also their commitment to their roles as students, and career maturity.

Further research in this area should consider the gender difference in regular high school students more closely. A closer investigation of the subscales that make up the Career Development Attitudes and Career Development Knowledge composite scales is recommended.

A final suggestion for future research is to incorporate the use of all of the scales of the SI with an attempt to replicate the current study. It was be of interest to compare group differences in high school students in their roles as homemakers, leisurites, and citizens.

Conclusion

Osipow (1990) views the major problem in career counseling research to be the development of suitable criteria for counseling which match significant client and situational circumstances. Osipow echoes an age-old problem in the study of career development which has been approached by many writers with very different backgrounds and for very different purposes. Although there have been several attempts to synthesize the various approaches there remains no one generally accepted theory of career development (Clawson, Kotter, Faux, & McAuthur, 1985). The major differences in the two camps, according to the authors, can be characterized as having a sociological versus a psychological perspective.

A unique feature of this study was that it focused on both the changing circumstances faced by our society, the rapidly increasing mismatch between labor market realities and the availability of trained workers. Emphasis was placed on the mounting concern of the achievement levels of students and the trends of chronic youth unemployment. The study also examined psychological characteristics and involvement in work of two samples of high school students. One sample of subjects was characterized as new entrees to the work force who are attempting to resolve their personal and economic needs by entering the work force at an early age and forfeiting the structured

activities of regular high school to attend an alternative high school. This study investigated career maturity variables in these two groups of students which included their personal knowledge of work, their attitudes and values, and their relative commitment to their roles as workers and as students.

Results of this investigation support the need for counselors to know how ready students are to make career choices. Developmental theories such as the Developmental Assessment Model for Career Guidance (Super, 1982) can be useful to program developers who wish to develop interventions focusing on specific life stages. It is also important for counselors to examine students in light of their commitment to the roles of students and workers. This study showed that contrary to the opinion of many, alternative high school students were more career mature and more committed to both work and study than were regular high school students.

This investigation has contributed to the research literature on career development theory and assessment for high school students and supports previous research. A broader question is still only partially answered. What effect does increased participation in work at an early age have upon teenagers as they begin to exercise aspects of their personality in career choice, planning, and implementation? In other words, does after-school work

really pay off for teenagers? This study may relieve worries of some parents about the effect that early entry into the labor force has on their children. Clearly, students involved in work are more mature and committed to both their roles as workers and students than are students who are not involved in work. Nonetheless, it is evident that too much work probably does interfere with education itself. What is the optimum amount is still unknown. We obviously have a long road of future research ahead of us before sufficient data will have been collected on all aspects of career maturity.

APPENDIX A
PERSONAL DATA FORM

1. Identification code _____.
2. Age _____.
3. Sex _____.
4. Race/Ethnic identification _____.
5. Total number of credits earned as of this date ___.
6. Last date of attendance in public high school _____.
7. Do you intend to go to college or vocational school? _____.
8. What kind of work do you plan to do? _____
9. Do you plan to transfer to The Adult High School at SCC? _____.
10. Do you currently hold a job? _____.
11. How many hours do you work per week? _____.
12. What level of work do each of these relatives normally do or would do if working?

Father	Mother	
_____	_____	Professional and Managerial
_____	_____	Clerical and Sales
_____	_____	Skilled
_____	_____	Semi-skilled or Unskilled
_____	_____	Does not apply

13. What kind of work do or did your parents do?

Father	Mother	
_____	_____	Physical Science: Research
_____	_____	Physical Science: Applied
_____	_____	Biological and Medical Science
_____	_____	Social Science: Research
_____	_____	Social Science: Teaching/Social Service
_____	_____	Writing and Law

_____	_____	Art and Music
_____	_____	Public Performance
_____	_____	Business: Financial
_____	_____	Business: Management
_____	_____	Business: Sales/Promotion
_____	_____	Business: Office/Clerical
_____	_____	Business: Merchandising
_____	_____	Technical: Physical Science
_____	_____	Technical: Health Service
_____	_____	Technical: Crafts
_____	_____	Technical: Outdoor
_____	_____	Technical: Mechanical
_____	_____	Personal Service
_____	_____	Manual/Physical

APPENDIX B
INFORMED CONSENT FORM

My name is Charles English and I am a graduate student in counseling psychology at the University of Florida. As part of my dissertation research I need to gather information on career attitudes of high school students. I will need to administer the Career Development Inventory, the Salience Inventory, and a personal data form to gather data on career maturity attitudes of high schools students. Individual student scores will be kept confidential through a coding system. The tests will be administered by me during school hours as a part of the ordinarily scheduled instruction of the teacher and will take two class periods. The instruments are all paper and pencil ones where subjects will have to fill in the appropriate answers of their choice.

This study does not involve any discomfort or risks to the subject, and will enable the subject to see firsthand methods used in psychological research while gaining valuable information about their career attitudes and behaviors. A full explanation of the experiment and a group interpretation of the test results will be given to the subjects following their participation. Each parent or potential subject is free to withdraw his/her consent and discontinue participation in the study at any time without prejudice. No monetary or other compensation will be awarded for taking part in this study and participation or nonparticipation in the study will not affect the child's grade in any class.

I am available to answer any questions you have about this study. Please call me locally at: 682-4570.

Thank you

- -

"I have read and understand the procedure described above. I agree to allow my child, _____, to participate in Mr. English's "A Comparison of Career Maturity and Commitment to Work of Alternative and Regular High School Students" study and I have received a copy of the description.

Signatures:

_____ _____ _____ _____

Parent/Guardian date Parent/Guardian date

APPENDIX C
UNIVERSITY OF FLORIDA
CHILD ASSENT SCRIPT

Hello, my name is Charles English. I am a graduate student at the University of Florida in Gainesville. Your parents have given consent for you to participate in this research for my doctorate in counseling psychology.

This study entitled "A comparison of Career Maturity and Commitment to Work of Alternative and Regular High School Students," will involve your responding to questions on a personal data form and two tests. This study does not involve any discomfort or risks to you, and will enable you to see firsthand methods used in psychological research while gaining valuable information about your career attitudes and behaviors. I will give a full explanation of the experiment and a group interpretation of the test results at a later date. Any of you are free to withdraw your consent and discontinue participation in the study at any time without prejudice.

No compensation or other rewards will be given for this study. I thank you for your willingness to participate in this study.

APPENDIX D
NEW YORK STATE SELF-ESTEEM SCALE
(ROSENBERG SELF-ESTEEM)

Please indicate your agreement or disagreement with the following statements about yourself.

1. On the whole, I am satisfied with myself.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

2. At times I think I am no good at all.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

3. I feel that I have a number of good qualities.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

4. I am able to do things as well as most other people.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

5. I feel I do not have much to be proud of.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

6. I certainly feel useless at times.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

7. I feel I'm a person of worth, at least on an equal plane with others.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

8. I wish I could have more respect for myself.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

9. All in all, I am inclined to feel that I'm a failure.
   Strongly Agree 1 2 3 4 5 Strongly Disagree

10. I take a positive attitude toward myself.
    Strongly Agree 1 2 3 4 5 Strongly Disagree

APPENDIX E
QUESTIONS FROM THE SALIENCE INVENTORY (SI)

Questions Which Apply to the Role of Worker

A. What you actually do or have done recently ...

1. I have spent time in ...
2. I have talked or do talk to people about ...
3. I have spent or do spend time reading about ...
4. I have taken or do take advantage of opportunities in ...
5. I have been or am active in an organization that has to do with ...
6. I have improved my performance in ...
7. I am active in ...
8. I have accomplished something in ...
9. As often as I can, I take part in ...
10. I have some books and magazines on ...

B. How you feel about working ...

1. It is or will be important to me to be good in ...
2. I am or expect to be very much involved in ...
3. I would like to be remembered for what I did in ...
4. I would like to be active for many years in ...
5. I really am committed to being active in ...
6. I am or will be proud to do well in ...
7. I really feel personally involved in ...
8. I admire people who are good at ...

9. I find it difficult to take part in ...

10. I would like to have plenty of time for ...

C. What opportunity to you see now or in the future to work ...

1. use all your skills and knowledge in ...

2. know that your efforts will show in ...

3. make life more beautiful by ...

4. help people with problems in ...

5. act on your own in ...

6. discover or make new things in ...

7. have a high standard of living through ...

8. live your life your own way in ...

9. be physically active in ...

10. be admired for your knowledge and skills in ...

11. feel that you can take some risks in ...

12. do things with other people in ...

13. do a number of different things in ...

14. have good conditions for ...

Questions Which Apply to the Role of Student

A. What you actually do or have done recently ...

1. I have spent time in ...

2. I have talked or do talk to people about ...

3. I have spent or do spend time reading about ...

4. I have taken or do take advantage of opportunities in ...

5. I have been or am active in an organization that has to do with ...

6. I have improved my performance in ...

7. I am active in ...

8. I have accomplished something in ...

9. As often as I can, I take part in ...

10. I have some books and magazines on ...

B. How you feel about studying ...

1. It is or will be important to me to be good in ...

2. I am or expect to be very much involved in ...

3. I would like to be remembered for what I did in ...

4. I would like to be active for many years in ...

5. I really am committed to being active in ...

6. I am or will be proud to do well in ...

7. I really feel personally involved in ...

8. I admire people who are good at ...

9. I find it difficult to take part in ...

10. I would like to have plenty of time for ...

C. What opportunity to you see now or in the future to study ...

1. use all your skills and knowledge in ...

2. know that your efforts will show in ...

3. make life more beautiful by ...

4. help people with problems in ...

5. act on your own in ...

6. discover or make new things in ...

7. have a high standard of living through ...

8. live your life your own way in ...

9. be physically active in ...

10. be admired for your knowledge and skills in ...
11. feel that you can take some risks in ...
12. do things with other people in ...
13. do a number of different things in ...
14. have good conditions for ...

APPENDIX F
CAREER DEVELOPMENT INVENTORY (CDI)

Part I. Career Orientation

A. CAREER PLANNING
How much thinking and planning have you done in the following areas? For each question below choose the answer that best tells what you have done so far.

1. Finding out about educational and occupational possibilities by going to the library, sending away for information, or talking to somebody who knows.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

2. Talking about career plans with an adult who knows something about me.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

3. Taking classes which will help me decide what line of work to go into when I leave school or college.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

4. Taking classes which will help me in college, in job training, or on the job.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

5. Taking part in school or out-of-school activities which will help me in college, in training, or on the job.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

6. Taking part in school or after-school activities (for example, science club, school newspaper, volunteer nurse's aide) which will help me decide what kind of work to go into when I leave school.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

7. Getting a part-time or summer job which will help me decide what kind of work I might go into.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

8. Getting money for college or for job training.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

9. Working out problems that might make it hard for me to get the kind of training or the kind of work I would like.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

10. Getting the kind of training, education, or experience I will need to get the kind of work I would like.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

11. Getting a job once I have finished my education and training.

   A. I have not yet given any thought to this.
   B. I have given some thought to this, but haven't made any plans yet.
   C. I have some plans, but am still not sure of them.
   D. I have made definite plans, but don't know yet how to carry them out.
   E. I have made definite plans, and know what to do to carry them out.

12. Doing things that will help me be a good worker, one who is most likely to be sure of a job.

A. I have not yet given any thought to this.
B. I have given some thought to this, but haven't made any plans yet.
C. I have some plans, but am still not sure of them.
D. I have made definite plans, but don't know yet how to carry them out.
E. I have made definite plans, and know what to do to carry them out.

The next questions concern the kind of work you would like to do when you complete your education. At this stage, you probably have not definitely decided on a specific occupation, but you probably can think of a field of work or type of job you would like to work at. Keeping in mind the type of job you think you might like to be in after you finish your schooling, choose the one best answer which tells the amount of knowledge you already have about these jobs.

13. What people really do on the job.

A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

14. The abilities needed for the occupation.

A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

15. The working conditions on such jobs.

A. Hardly any knowledge.
B. A little knowledge.
C. An average amount of knowledge.
D. A good deal of knowledge.
E. A great deal of knowledge.

16. The education or training needed to get such a job.

    A. Hardly any knowledge.
    B. A little knowledge.
    C. An average amount of knowledge.
    D. A good deal of knowledge.
    E. A great deal of knowledge.

17. The need for people on that kind of job in the future.

    A. Hardly any knowledge.
    B. A little knowledge.
    C. An average amount of knowledge.
    D. A good deal of knowledge.
    E. A great deal of knowledge.

18. Different ways of getting into that occupation.

    A. Hardly any knowledge.
    B. A little knowledge.
    C. An average amount of knowledge.
    D. A good deal of knowledge.
    E. A great deal of knowledge.

19. The chances of advancing in that kind of job or occupation.

    A. Hardly any knowledge.
    B. A little knowledge.
    C. An average amount of knowledge.
    D. A good deal of knowledge.
    E. A great deal of knowledge.

20. What sort of working day and work week I might have in the occupation.

    A. Hardly any knowledge.
    B. A little knowledge.
    C. An average amount of knowledge.
    D. A good deal of knowledge.
    E. A great deal of knowledge.

B. CAREER EXPLORATION
Questions 21 through 30 have four possible answers. Choose the <u>one best</u> answer for each question to show whether or not you would go to the following sources for information or help in making your plans for work or further education.

21. Father, mother, uncles, aunts, etc.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

22. Brothers, sisters, or cousins.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

23. Friends.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

24. Coaches of school or other teams.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

25. Teachers.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

26. School counselors.

A. Definitely not.
B. Probably not.
C. Probably.
D. Definitely.

27. Other adults who know things and can help people.

    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.

28. College catalogues, books, guidance materials, etc.

    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.

29. People in the occupation or at the institute or college I am considering.

    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.

30. TV shows, movies, or magazines.

    A. Definitely not.
    B. Probably not.
    C. Probably.
    D. Definitely.

Questions 31 through 40 also have four possible answers. This time choose the <u>one best</u> answer to show how much useful information the people or sources listed below have already given you or directed you to in making your plans for the future.

31. Father, mother, uncles, aunts, etc.

    A. <u>No</u> useful information.
    B. <u>Some</u> useful information.
    C. A <u>good deal</u> of useful information.
    D. A <u>great deal</u> of useful information.

32. Brothers, sisters, or other relatives.

    A. <u>No</u> useful information.
    B. <u>Some</u> useful information.
    C. A <u>good deal</u> of useful information.
    D. A <u>great deal</u> of useful information.

33. Friends.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

34. Coaches of school or other teams.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

35. Teachers.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

36. School counselors.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

37. Other adults who know things and can help people.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

38. College catalogues, books, guidance materials, etc.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

39. People in the occupation or at the institute or college I am considering.

A. No useful information.
B. Some useful information.
C. A good deal of useful information.
D. A great deal of useful information.

40. TV shows, movies, or magazines.

    A. No useful information.
    B. Some useful information.
    C. A good deal of useful information.
    D. A great deal of useful information.

C. DECISION-MAKING
What should each of the following students do? Choose the one best answer for each case.

41. E.R. took some tests which show some promise for clerical work. This student says, "I just can't see myself sitting behind a desk for the rest of my life. I'm the kind of person who likes variety. I think a traveling job would suit me fine." E.R. should:

    A. disregard the tests and do what he or she wants to do.
    B. do what the tests say since they know best.
    C. look for a job which requires clerical ability but does not pin one to a desk.
    D. ask to be tested with another test since the results of the first one are probably wrong.

42. J. D. might like to become a computer programmer, but knows little about computer programming, and is going to the library to find out more about it. The most important thing for J.D. to know now is:

    A. what the work is, what one does on the job.
    B. what the pay is
    C. what the hours of work are.
    D. where one can get the right training.

43. A.M. is very good with skilled handiwork and there isn't anybody in the class who has more mechanical aptitude or is better at art. A.M.'s best grades are in math, but A.M. likes all of these things. What should A.M. do?

    A. Look for an occupatio which will use as many of these interests and abilities as possible.
    B. Pick an occupation which uses math, since there is a better future in that than in art or in working with one's hands.
    C. Decide now on one of these activities because of ability or interest, and then pick an occupation which uses that kind of asset.
    D. Put off deciding about the future and wait until interest in some of these activities declines.

44. B.R. gets very good science grades but doesn't care too much about this subject. The subject B.R. liked best is art even though grades in it are only average. This student is more likely to do well in a future occupation if he or she:

    A. forgets about interest in art since achievement is so much better in science.
    B. doesn't worry about the achievement in art, because if you like something you can become good at it.
    C. looks for an occupation which uses both art and science, but more science than art.
    D. looks for an occupation which involves both science and art, but more art than science.

45. L.F. seems not to really care what kind of work is available on leaving school as long as it is working with people. If this is all this student cares about, he or she is likely to make a bad choice because:

    A. this kind of work usually requires a college degree.
    B. employers usually hire people with definite interests and objectives.
    C. people look down on those who work with people because such work usually doesn't pay as well as technical work.
    D. occupations in which one works with people can be very different from each other in the abilities and interests which are needed.

46. R.A. has good grades in all high school courses, wants to go to college, has parents' approval for going to college, but has no occupational plans. What is the best next step for R.A.?

    A. Delay college until occupational plans emerge.
    B. Choose a college major that is very difficult.
    C. Choose a college where exploring several majors is encouraged during the first two years.
    D. Find out about graduate and professional school requirements.

47. A.K. can't decide whether to become an air-conditioning and refrigeration technician or an engineer. In making the choice, to which of the following should A.K. pay the most attention?

    A. How much money A.K. wants to earn.
    B. How much education and training A.K. is likely to be able to get.
    C. What A.K.'s parents would prefer.
    D. Which occupation people respect most.

48. P.T. is a high school junior with no education or vocational plans beyond high school. What would you recommend that P.T. do first?

    A. A thorough search of colleges to attend.
    B. An analysis of relevant personal characteristics such as abilities, interests, and values.
    C. An intensive study of information about occupations.
    D. A matching of P.T.'s abilities with job requirements.

49. E.B. is a ninth-grader with excellent school grades and very high scores on all ability tests, but has no educational or vocational plans. What is the best advice to give to E.B.?

    A. Arrive at a definite goal as soon as possible.
    B. Not to be concerned about a goal or a plan because success is almost certain.
    C. Concentrate on selecting the right college.
    D. Find out when important choices will have to be made and get the needed information.

50. An uncle has just told T.H. that his company is always looking for tool and die makers, pays them well and keeps them on the payroll even in bad times. T.H. is interested and wants to learn more about the occupation. What is the most important thing for T.H. to learn?

    A. Where tool and die makers work.
    B. How much training is required.
    C. What is the work tool and die makers do.
    D. What tool and die makers actually are paid.

51. L.M. has good school grades and looks forward to studying engineering in college. What is the best advice to help L.M. plan a tenth-grade course schedule?

    A. Be sure to schedule college preparatory math and science.
    B. Get all of the shop courses it is possible to take.
    C. Take a light load because in college it will be hard work.
    D. Allow time for a part-time job to learn what engineers do.

52. J.M., who has always dreamed of being either a lawyer or a business executive, cannot plan for college because of the cost. J.M.'s grades and test scores show good promise for college. What should be recommended for J.M. after high school?

    A. Find a job in a law office and go to law school at night.
    B. Get a job in a business concern that offers on-the-job training and other educational opportunities.
    C. Forget about law and business and work in a field that requires no education.
    D. Find a rewarding hobby.

53. M.J. is considering becoming either a research chemist or a lawyer. In choosing between the two, which of the following should be given the most weight?

    A. Whether M.J.'s ability in science and grades in science courses are good enough.
    B. Whether M.J. can afford to go to college.
    C. Whether M.J. can get admitted to college.
    D. Whether M.J.'s friends think the choice is a good one.

54. After careful thought, E.K. has decided on business training for a year or two after high school. However, deciding between majors in accounting and sales remains a problem for E.K. In exploring this problem, to what should be given the most weight?

    A. The difference in training time required by the two majors.
    B. The chances of being admitted for training in the major.
    C. Which major requires the most work.
    D. Which major best fits E.K.'s abilities and interests.

55. J.F. is the best all-around artist in the class, winning art competitions consistently. But academic subject matter comes hard to J.F., who will probably graduate in the bottom fifth of the senior class. Which is the most realistic educational plan for J.F.?

    A. Seek admission to a university where one can combine art and regular college subjects to earn a Bachelor of Fine Arts.
    B. Forget about any education beyond high school.
    C. Forget about art and concentrate on college preparatory subjects.
    D. Seek admission to an art school where poor academic grades will not be a handicap.

56. L.D. wants to be a newspaper reporter. Which of the following paths might lead to becoming a qualified newspaper reporter?

    A. Working full-time on a newspaper and continuing education on a part-time basis.
    B. Earning a bachelor's degree in journalism.
    C. Taking a liberal arts degree first, followed by a graduate degree in journalism.
    D. Any of the above.

57. B.D.'s interest in and skill at helping others have become the most important part of B.D.'s self-picture. Which occupation should B.D. probably <u>not</u> be considering?

    A. Nurse's aide.
    B. Recreation worker.
    C. Sales person.
    D. Teacher's aide.

58. R.R. gets B's in math and science but has failed ninth-grade English twice, and gets D's in social studies courses. Which occupation makes the most sense for R.R.?

    A. Engineering technician.
    B. Veterinarian.
    C. Civil engineer.
    D. Science and math teacher.

59. R.J. has high ability, excellent grades and the money to go to college. R.J.'s only clear future goal is to make a great deal of money. What should R.J. do?

    A. Pursue a career in medicine because that's where the money is.
    B. Arrive at an appropriate vocational goal and the money will take care of itself.
    C. Change goals because wanting a lot of money is not a good thing.
    D. Find out what wanting to make a lot of money really means.

60. A.S. has good tested ability but has poor high-school grades. The counselor advises that A.S. will not be admitted to any college because of the high school record. A.S. thinks the problems that caused the low grades are now solved and wants to get more education. What is A.S.'s best course of action?

    A. Forget about college and seek a satisfying job.
    B. Repeat courses in high school in order to improve the grades.
    C. Find out about junior colleges and community colleges whose admission standards are less demanding.
    D. Get private tutoring in the weak subjects.

D. WORLD-OF-WORK INFORMATION

Choose the <u>one best</u> answer to each of the following questions about career development and the world of work.

61. Tenth graders should be expected to know

    A. exactly what occupation they want to go into.
    B. the kind of work but not necessarily the specific occupation they want.
    C. where to get the job they want.
    D. the different occupations a person with their interests and abilities could go into.

62. When a teacher or counselor encourages students to explore themselves and the world about them, what he or she wants them to do is to

    A. be active in school affairs.
    B. go on field trips.
    C. try themselves out in a variety of situations and activities.
    D. take some aptitude tests.

63. Exploring interests, abilities and opportunities is something which people should be encouraged to engage in

    A. throughout their lives.
    B. when they become dissatisfied with the way things are.
    C. when they lose their jobs.
    D. when things start to go wrong.

64. Which of the following will help high school students most in thinking about a career?

    A. Making the right contacts.
    B. Setting an occupational goal early and sticking to it.
    C. Finding out where the best opportunities for employment are.
    D. Finding out what activities and courses they like most and are best at.

65. The reason why many young people change jobs frequently between the ages of 18 and 25 is that they

    A. don't know when they are well off.
    B. received wrong advice from their parents and teachers.
    C. are the first to be fired when business is bad.
    D. don't know enough about themselves or work to make good choices.

66. Suppose you know what kind of work you would like to do and also know about the many different occupations which can be found in that field. What information would you need to be able to pick out those occupations which are at the right level for you? (By field is meant the kind of work you would like to do, for example, scientific work, social service work, work involving machines and tools; by level is meant the amount of education and training you would need to get, and the amount of responsibility you would have to carry on the job.)

    A. Information about your abilities.
    B. Information about educational and training requirements.
    C. Information about what it would cost to get the needed training and education.
    D. All of the above.

67. The most important thing about the courses you take at college or the jobs you take after you leave school is

    A. what the courses or jobs tell you about your interests and abilities.
    B. whether the courses or jobs are easy or difficult.
    C. whether your parents approve of the choice of courses or jobs.
    D. what your instructors or employers think of you.

68. Being happy in a job is mostly a matter of

    A. being paid well.
    B. having interesting things to do when your day's work is done.
    C. knowing what you want from a job and getting it.
    D. receiving promotions and pay increases.

69. Students who want to go to college or to seek a particular kind of job when they leave high school can improve their chances most by

    A. being active in school affairs.
    B. choosing appropriate high school courses.
    C. getting along with their teachers and counselors.
    D. choosing courses in which they know they will get good grades.

70. A student who, on leaving high school, takes a semi-skilled factory job at a good wage instead of a learner's job or apprenticeship

    A. gives up a better future for a better present.
    B. should work his way up to a more skilled job easily enough.
    C. is probably following the school counselor's advice.
    D. is probably giving in to pressure from parents.

71. Family doctors (physicians) usually learn their jobs in

    A. high schools.
    B. community colleges or technical schools.
    C. four-year colleges or universities.
    D. graduate or professional schools.

72. Mail carriers usually learn their jobs in

    A. high schools.
    B. apprenticeships or on-the-job training.
    C. community colleges or technical schools.
    D. four-year colleges or universities.

73. Medical laboratory technicians are most likely to use

    A. levels.
    B. log tables.
    C. tongue depressors.
    D. microscopes.

74. A stock broker is most likely to use

    A. a calculator.
    B. calipers.
    C. forceps.
    D. a micrometer.

75. Bookkeepers are most likely to use

    A. lathes.
    B. calculators.
    C. ledgers.
    D. slide rules.

76. Which of the following workers is most likely to be able to forget about work after leaving the workplace?

A. Administrative assistant
B. Secretary
C. Typist
D. Credit clerk

77. Waters and waitresses are usually paid

A. weekly salaries.
B. hourly wages.
C. wages and tips.
D. tips only.

78. In starting a new job, it is most important to

A. make sure the other workers like you.
B. show that you are your own boss.
C. be aware of how others feel about things.
D. hide your own feelings from others.

79. In dealing with customers, clients, or other outsiders with whom your work brings you in contact, it is most important to

A. show them you know more about your work than they do.
B. understand what they want and see if you can help them get it.
C. make sure that you do only as you are told.
D. do whatever brings in the most money.

80. Which of the following is most important in a job application interview?

A. Telling the interviewer you will do any work so long as the job is a good one.
B. Knowing what salary or pay to ask for.
C. Finding out whether you and the job are right for each other.
D. Being introduced by a mutual friend.

Part II. Knowledge of Preferred Occupation

One of the kinds of information required in career planning is knowledge of the occupational world, particularly of the occupations being considered as possible career goals.

This section is designed to help you determine how much you know about the occupational area you are currently moving toward in your career planning, even though you may not have definitely decided on a specific occupation.

INSTRUCTIONS

First, turn to the back of your answer sheet to the Occupational Group Preference Form and follow the instructions there. Use the form to select one of the Occupational Groups (A to T).

Next, fill in the information requested on the answer sheet if you have not already done so. Follow the instructions of the person administering the inventory. Be sure to mark your chosen Occupational Group (A to T) on the front of the answer sheet. Make all the marks for the following questions in the lower third of the answer sheet labeled "Part II," using a #2 lead pencil only.

All your answers to the remaining questions should be in terms of the Occupational Group you selected when filling out the Preference Form on the back of your answer sheet. Please answer every question. If you are not sure about an answer, guess.

Characteristics of Preferred Occupation: These five questions below deal with the kind of work involved. They should be answered in terms of the Occupational Group you have selected when filling in the Occupational Group Preference Form. Be sure that you have marked the letter of your Preferred Occupational Group on the answer sheet.

Duties: Most occupations involve some combination of working with words, numbers, people, and things. In your Preferred Occupational Group the:

1. most important is:
   A. words. B. numbers. C. people. D. things.

2. next most important is:
   A. words. B. numbers. C. people. D. things.

3. least important is:
   A. words. B. numbers. C. people. D. things.

4. Tools and Equipment: The Occupational Group you selected requires the use of

   A. no special tools or equipment.
   B. hand-tools, without real precision.
   C. hand-tools, with real precision.
   D. equipment, with simple handling or adjustments.
   E. complex equipment requiring technical knowledge and skill.

5. Physical Requirements: In this Occupational Group the work is generally:

   A. sedentary; done sitting down and lifting only light objects.
   B. light; one may stand or walk but does not have to lift heavy objects.
   C. moderately heavy; things to be lifted never weigh more than 50 pounds and usually less than 25.
   D. heavy; with much standing, walking, and lifting objects weighing up to 100 pounds in loading or moving equipment.

Ability Requirements: Occupations differ in the abilities required to learn and do the work. Following is a list of these abilities. Think of how people differ in these abilities and rate your Occupational Group to show how much of each of the abilities is typical of workers in the Occupational Group.

6. Verbal ability (understanding and working with words). On this ability, this Occupational Group is typically made up of

   A. the bottom 10% of people in general.
   B. below average people.
   C. average, middle third of people in general.
   D. above average people.
   E. the top 10% of people in general.

7. Non-verbal reasoning (ability to find relationships among objects, patterns and designs). On this ability, this Occupational Group is typically made up of

   A. the bottom 10% of people in general.
   B. below average people.
   C. average, middle third of people in general.
   D. above average people.
   E. the top 10% of people in general.

8. Numerical ability (working with numbers and using them in solving problems). On this ability, this Occupational Group is typically made up of

   A. the bottom 10% of people in general.
   B. below average people.
   C. average, middle third of people in general.
   D. above average people.
   E. the top 10% of people in general.

9. Clerical ability (ability to check combinations of letters and numbers quickly and accurately). On this ability, this Occupational Group is typically made up of

   A. the bottom 10% of people in general.
   B. below average people.
   C. average, middle third of people in general.
   D. above average people.
   E. the top 10% of people in general.

10. Mechanical ability (ability to understand mechanical principles and equipment and to apply the laws of everyday science). On this ability, this Occupational Group is typically made up of

    A. the bottom 10% of people in general.
    B. below average people.
    C. average, middle third of people in general.
    D. above average people.
    E. the top 10% of people in general.

11. Spatial ability (ability to see objects in relation to each other, to judge sizes and shapes, and to think in three dimensions). On this ability, this Occupational Group is typically made up of

    A. the bottom 10% of people in general.
    B. below average people.
    C. average, middle third of people in general.
    D. above average people.
    E. the top 10% of people in general.

12. Motor coordination (ability to move body accurately, quickly and smoothly). On this ability, this Occupational Group is typically made up of

    A. the bottom 10% of people in general.
    B. below average people.
    C. average, middle third of people in general.
    D. above average people.
    E. the top 10% of people in general.

13. English skills (knowledge of use of correct grammar, punctuation and capitalization). On this ability, this Occupational Group is typically made up of

    A. the bottom 10% of people in general.
    B. below average people.
    C. average, middle third of people in general.
    D. above average people.
    E. the top 10% of people in general.

14. Reading ability. On this Occupational Group, workers must be able to

    A. read and remember complex passages involving special vocabularies.
    B. understand the meanings of words in general literary use.
    C. read ordinary newspapers and carry on conversations.
    D. understand simple instructions and answer simple questions.

Interests: Consider the interests involved in your Preferred Occupational Group.

15. Here are 9 types of interests which people may have. Choose the one which is most typical of the occupations in the group you selected. Mark the corresponding letter on the answer sheet for Question 15.

A.	Verbal	--working with words, stories, ideas
B.	Numerical	--working with numbers, arithmetic, calculators, etc.
C.	Clerical	--detail work calling for accuracy and neatness with words or figures
D.	Mechanical	--working with things, machines, equipment
E.	Scientific	--experimenting, laboratory research, understanding the how and why of things
F.	Artistic/ Musical	--enjoying design, color, shape or enjoying listening to or playing music
G.	Promotional	--influencing others personally or in writing
H.	Social	--helping people who are in need or in trouble
I.	Outdoor	--activities involving being outdoors

16. Now choose the one from the above list (A to I) which is second most typical of the occupations in your Occupational Group Preference. Record that letter in the box on the Answer Sheet for Question 16.

Values: Occupations differ in the extent to which they permit workers in the occupation to find what they want in life. In the following 14 questions, indicate how well the Occupational Group you picked provides opportunities for satisfying the values listed.

17. Achievement (feeling you have really accomplished something): A. Poor B. Average C. Good

18. Altruistic (helping people): A. Poor B. Average C. Good

19. Artistic (enjoying beauty): A. Poor B. Average C. Good

20. Companionship (having pleasant people to work with:	A. Poor	B. Average	C. Good
21. Creative (making new things or creating new ideas):	A. Poor	B. Average	C. Good
22. Economic (making plenty of money and having good things):	A. Poor	B. Average	C. Good
23. Independence (being free to do things your way):	A. Poor	B. Average	C. Good
24. Intellectual (working with ideas and solving problems):	A. Poor	B. Average	C. Good
25. Managing (planning work and supervising people):	A. Poor	B. Average	C. Good
26. Prestige (having the respect of others):	A. Poor	B. Average	C. Good
27. Security (being sure of a job):	A. Poor	B. Average	C. Good
28. Variety (changing activities or location):	A. Poor	B. Average	C. Good
29. Way-of-life (living a good life in a nice place):	A. Poor	B. Average	C. Good
30. Working Conditions (having a good place to work in):	A. Poor	B. Average	C. Good

Other Characteristics:

31. Select the response below which shows the amount of education required by your Preferred Occupational Group.

    A. postgraduate degree (M.A. or Ph.D.) from a graduate school.
    B. professional degree (M.D., LLB., etc.) from a professional school.
    C. B.A. or B.S. from a college or university.
    D. A.A. or certificate from a two-year college.
    E. diploma from a business or technical school after high school.
    F. high school diploma.
    G. none of the above.

32. In your Preferred Occupational Group one needs

    A. no specialized training.
    B. special courses (for instance, commercial or vocational) in high school.
    C. an apprenticeship or more than a few days of on-the-job training.
    D. one or more short courses in business or technical school.
    E. a particular major in college.
    F. a postgraduate or professional degree in a special field.

33. The best single way to get one's first job in this Occupational Group is through

    A. direct application to the employer.
    B. an examination that puts one on the eligible list.
    C. the union.
    D. one's school, or college, or professional school.
    E. an employment agency.

34. Occupations vary in their social and economic levels, that is, in how well the people working in them can live. How does the Occupational Group you have in mind compare with others in this way? It is

    A. among the lowest.
    B. below average.
    C. about average in how people can live.
    D. above average.
    E. among the highest level occupations.

35. The work in some occupational fields is likely to change considerably as a result of future developments in technology and science. The Occupational Group you are rating is likely to

    A. require quite different knowledge and skills.
    B. change somewhat.
    C. stay pretty much the same.

36. How steady is the work in this Occupational Group?

    A. Even in bad times, workers are usually sure of a job and a regular income.
    B. Except in bad times, workers are usually sure of a job and a regular income.
    C. There is some risk of brief periods of unemployment.
    D. Employment is affected by economic changes and the risk of unemployment is great.

37. How steady is the income from this kind of work?

    A. Income goes up and down with worker performance, as in piece-work, or commission, or fee-charging jobs.
    B. Income varies from week to week with overtime pay or temporary lay-offs.
    C. Income is steady, based on a fixed salary.

38. Annual income differs from one occupation to another. How well does this Occupational Group pay? It is

    A. one of the lowest paying fields.
    B. below average.
    C. about average in how well it pays.
    D. above average.
    E. one of the highest paying fields.

39. Most people in this Occupational Group work for

    A. government agencies: federal, state, municipal, etc.
    B. private companies, organizations, or institutions.
    C. both governmental and private organizations.
    D. themselves.

40. The hours of work in these occupations are generally

A. regular, daytime hours fixed by the organization.
B. shift work, involving no change of shift.
C. shift work, involving changing shifts at times.
D. irregular, changing from day to day or week to week, as the situation demands.
E. irregular, but under control of the individual.
F. fixed, but under the control of the individual.

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BIOGRAPHICAL SKETCH

Charles English was born December 29, 1948, in Camden, South Carolina. He grew up in Camden where he attended Boylan Haven Mather Academy and graduated from high school in 1967. His college education was received at Clark College, now Clark-Atlanta University, in Atlanta, Georgia, where he received a Bachelor of Arts in psychology in 1971. After graduating from Clark, Charles entered graduate school at Mankato State University to pursue studies in vocational rehabilitation counseling. He was a awarded the Master of Science Degree in 1975 and began a career as a college professor and a counselor. Following a number of years working in the academic setting, he enrolled in the University of Florida to complete the requirements for the Doctor of Philosophy degree in counseling psychology.

Charles is the son of Mr. James E. English and the late Mrs. Louise A. English of Camden, South Carolina. He lives with his wife, Patry, and children, Angelica and Allen, in Altamonte Springs, Florida.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Dorothy D. Nevill, Chairperson
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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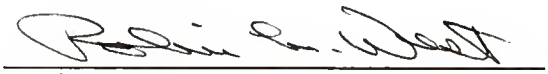

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This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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